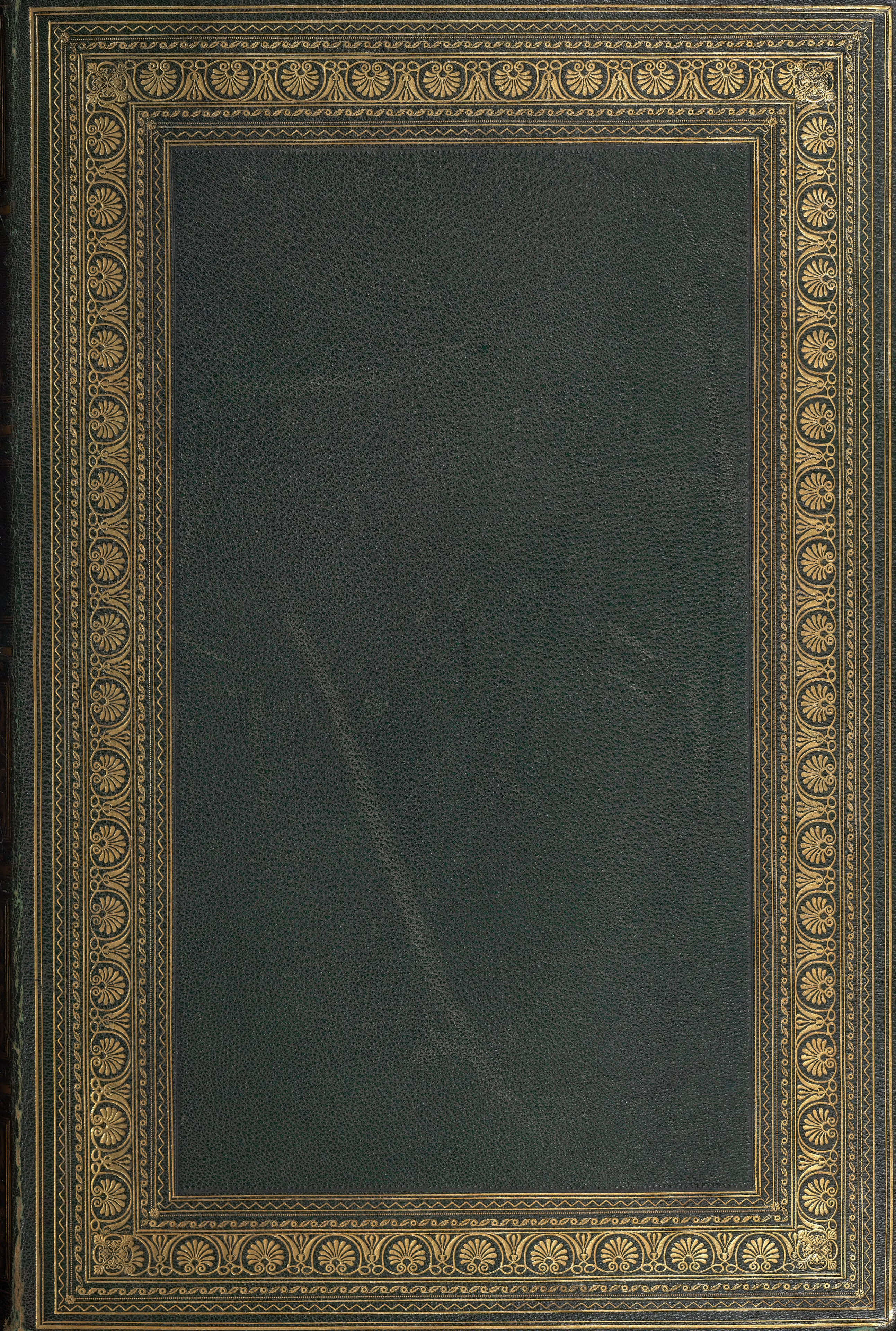
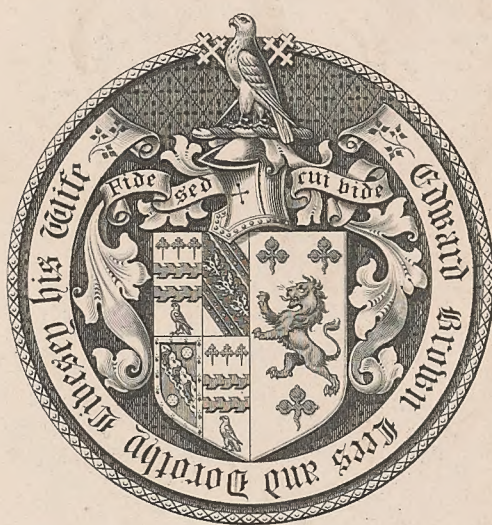
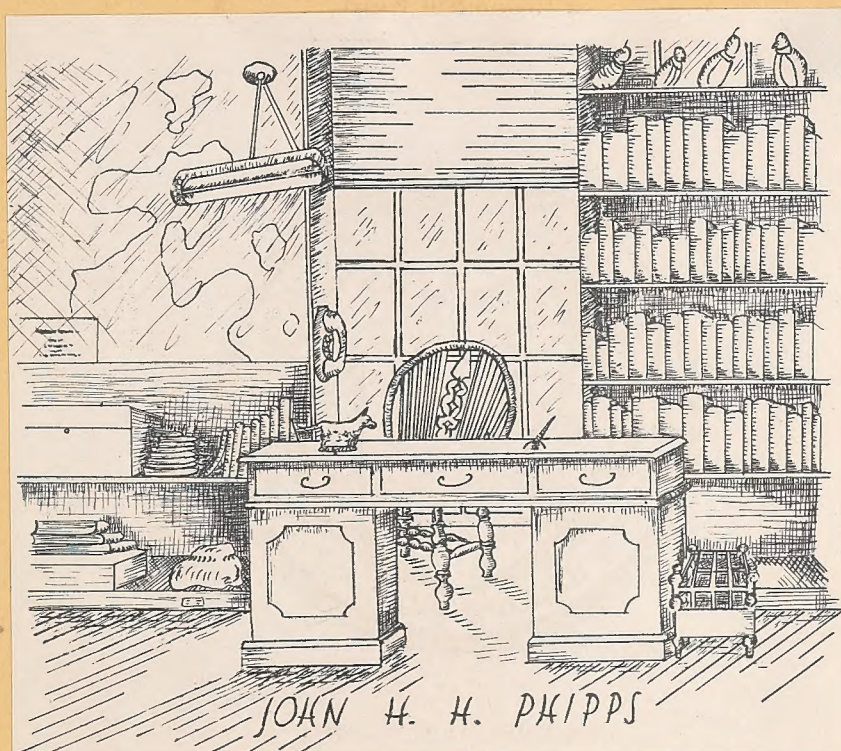






EARLHARD CASTLE.



THE
BIRDS OF AUSTRALIA.

BY
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LIST OF PLATES.

VOLUME II.

<i>Ægotheles Novæ-Hollandiæ</i>	Owlet Nightjar	1
——— <i>leucogaster</i> , <i>Gould</i>	White-bellied Owlet Nightjar	2
<i>Podargus humeralis</i> , <i>Vig. & Horsf.</i>	Tawny-shouldered Podargus	3
——— <i>Cuvieri</i> , <i>Vig. & Horsf.</i>	Cuvier's Podargus	4
——— <i>Phalænoïdes</i> , <i>Gould</i>	Moth-plumaged Podargus	5
——— <i>plumiferus</i> , <i>Gould</i>	Plumed Podargus	6
<i>Eurostopodus albogularis</i>	White-throated Goat-sucker	7
——— <i>guttatus</i>	Spotted Goat-sucker	8
<i>Caprimulgus macrurus</i> , <i>Horsf.</i>	Large-tailed Goat-sucker	9
<i>Acanthylis caudacuta</i>	Australian Spine-tailed Swallow	10
<i>Cypselus Australis</i> , <i>Gould</i>	Australian Swift	11
<i>Atticora leucosternon</i> , <i>Gould</i>	White-breasted Swallow	12
<i>Hirundo neoxena</i> , <i>Gould</i>	Welcome Swallow	13
<i>Collocalia arborea</i>	Tree Martin	14
——— <i>Ariel</i> , <i>Gould</i>	Fairy Martin	15
<i>Merops ornatus</i> , <i>Lath.</i>	Australian Bee-eater	16
<i>Eurystomus Australis</i> , <i>Swains.</i>	Australian Roller	17
<i>Dacelo gigantea</i>	Great Brown Kingfisher	18
——— <i>Leachii</i> , <i>Vig. & Horsf.</i>	Leach's Kingfisher	19
——— <i>cervina</i> , <i>Gould</i>	Fawn-breasted Kingfisher	20
<i>Halcyon sanctus</i> , <i>Vig. & Horsf.</i>	Sacred Halcyon	21
——— <i>pyrrhopygia</i> , <i>Gould</i>	Red-backed Halcyon	22
——— <i>sordidus</i> , <i>Gould</i>	Sordid Halcyon	23
——— <i>MacLeayii</i> , <i>Jard. & Selby</i>	MacLeay's Halcyon	24
<i>Alcyone azurea</i>	Azure Kingfisher	25
——— <i>pusilla</i>	Little Kingfisher	26
<i>Artamus sordidus</i>	Wood Swallow	27
——— <i>minor</i> , <i>Vieill.</i>	Little Wood Swallow	28
——— <i>cinereus</i> , <i>Vieill.</i>	Grey-breasted Wood Swallow	29
——— <i>albiventris</i> , <i>Gould</i>	White-vented Wood Swallow	30
——— <i>personatus</i> , <i>Gould</i>	Masked Wood Swallow	31
——— <i>superciliosus</i> , <i>Gould</i>	White-eyebrowed Wood Swallow	32
——— <i>leucopygialis</i> , <i>Gould</i>	White-rumped Wood Swallow	33
<i>Dicæum hirundinaceum</i>	Swallow Dicæum	34
<i>Pardalotus punctatus</i>	Spotted Pardalote	35
——— <i>rubricatus</i> , <i>Gould</i>	Red-lore'd Pardalote	36
——— <i>quadragintus</i> , <i>Gould</i>	Forty-spotted Pardalote	37
——— <i>striatus</i>	Striated Pardalote	38
——— <i>affinis</i> , <i>Gould</i>	Allied Pardalote	39
——— <i>melanocephalus</i> , <i>Gould</i>	Black-headed Pardalote	40
——— <i>uropygialis</i> , <i>Gould</i>	Yellow-rumped Pardalote	41
<i>Strepera graculina</i>	Great Crow-Shrike	42
——— <i>fuliginosa</i> , <i>Gould</i>	Sooty Crow-Shrike	43
——— <i>arguta</i> , <i>Gould</i>	Hill Crow-Shrike	44
——— <i>Anaphonensis</i>	Grey Crow-Shrike	45
<i>Gymnorhina Tibicen</i>	Piping Crow-Shrike	46
——— <i>leuconota</i> , <i>Gould</i>	White-backed Crow-Shrike	47
——— <i>organicum</i> , <i>Gould</i>	Tasmanian Crow-Shrike	48
<i>Cracticus nigrogularis</i> , <i>Gould</i>	Black-throated Crow-Shrike	49
——— <i>picatus</i> , <i>Gould</i>	Pied Crow-Shrike	50
——— <i>argenteus</i> , <i>Gould</i>	Silvery-backed Butcher-Bird	51
——— <i>destructor</i>	Butcher-Bird	52

Cracticus Quoyii	Quoy's Crow-Shrike	53
Grallina Australis	Pied Grallina	54
Graucalus melanops	Black-faced Graucalus	55
—— mentalis, <i>Vig. & Horsf.</i>	Varied Graucalus	56
—— hypoleucus, <i>Gould</i>	White-bellied Graucalus	57
—— Swainsonii, <i>Gould</i>	Swainson's Graucalus	58
Pteropodocys Phasianella, <i>Gould</i>	Ground Graucalus	59
Campephaga Jardinii, <i>Gould</i>	Jardine's Campephaga	60
—— Karu	Northern Campephaga	61
—— leucomela, <i>Vig. & Horsf.</i>	Black and White Campephaga	62
—— humeralis, <i>Gould</i>	White-shouldered Campephaga	63
Pachycephala gutturalis	Guttural Pachycephala	64
—— glaucura, <i>Gould</i>	Grey-tailed Pachycephala	65
—— melanura, <i>Gould</i>	Black-tailed Pachycephala	66
—— pectoralis	Banded Thickhead	67
—— falcata, <i>Gould</i>	Lunated Pachycephala	68
—— Lanoïdes, <i>Gould</i>	Shrike-like Pachycephala	69
—— rufogularis, <i>Gould</i>	Red-throated Pachycephala	70
—— Gilbertii, <i>Gould</i>	Gilbert's Pachycephala	71
—— simplex, <i>Gould</i>	Plain-coloured Pachycephala	72
—— olivacea, <i>Vig. & Horsf.</i>	Olivaceous Pachycephala	73
Colluricincla harmonica	Harmonious Colluricincla	74
—— rufiventris, <i>Gould</i>	Buff-bellied Colluricincla	75
—— brunnea, <i>Gould</i>	Brown Colluricincla	76
—— Selbii, <i>Jard.</i>	Selby's Colluricincla	77
—— parvula, <i>Gould</i>	Little Colluricincla	78
Falcunculus frontatus	Frontal Shrike-Tit	79
—— leucogaster, <i>Gould</i>	White-bellied Shrike-Tit	80
Oreoïca gutturalis	Crested Oreoïca	81
Dicrurus bracteatus, <i>Gould</i>	Spangled Drongo	82
Rhipidura albiscapa, <i>Gould</i>	White-shafted Fantail	83
—— rufifrons	Rufous-fronted Fantail	84
—— isura, <i>Gould</i>	Northern Fantail	85
—— Motacilloides, <i>Vig. & Horsf.</i>	Black Fantailed Flycatcher	86
Seisura inquieta	Restless Flycatcher	87
Piezorhynchus nitidus, <i>Gould</i>	Blue Shining Flycatcher	88
Myiagra plumbea, <i>Vig. & Horsf.</i>	Plumbeous Flycatcher	89
—— concinna, <i>Gould</i>	Pretty Flycatcher	90
—— nitida, <i>Gould</i>	Shining Flycatcher	91
—— latirostris, <i>Gould</i>	Broad-billed Flycatcher	92
Microëca macroptera	Great-winged Microëca	93
—— flavigaster, <i>Gould</i>	Yellow-bellied Microëca	94
Monarcha carinata	Carinated Flycatcher	95
—— trivirgata	Black-fronted Flycatcher	96
Gerygone albogularis, <i>Gould</i>	White-throated Gerygone	97
—— fuscus, <i>Gould</i>	Fuscous Gerygone	98
—— culicivorus, <i>Gould</i>	Western Gerygone	99
—— magnirostris, <i>Gould</i>	Great-billed Gerygone	100
—— lævigaster, <i>Gould</i>	Buff-breasted Gerygone	101
—— chloronotus, <i>Gould</i>	Green-backed Gerygone	102
Smicrornis brevirostris, <i>Gould</i>	Short-billed Smicrornis	103
—— flavescens, <i>Gould</i>	Yellow-tinted Smicrornis	104



Egotheles nove hollandiae: Vig et Horsf

ÆGOTHELES NOVÆ-HOLLANDIÆ, Vig. and Horsf.

Owlet Nightjar.

Crested Goat-sucker, Phill. Bot. Bay, pl. in p. 270.

Caprimulgus Novæ-Hollandiæ, Lath. Ind. Orn., vol. ii. p. 588.—Less. Traité d'Orn., p. 265.—Ib. Man., t. i. p. 412.

—Vieill. Nouv. Dict. d'Hist. Nat., t. x. p. 234.

—*cristatus*, Shaw in White's Voy., pl. in p. 241.

New-Holland Goat-sucker, Lath. Gen. Syn. Supp., vol. ii. p. 261.—Shaw, Gen. Zool., vol. x. p. 170.—Lath. Gen. Hist., vol. vii. p. 341.

Bristled Goat-sucker, Lath. Gen. Hist., vol. vii. p. 342.

Caprimulgus vittatus, Ib. Ind. Orn. Supp., p. lviii.

Banded Goat-sucker, Ib. Gen. Syn. Supp., vol. ii. p. 262, pl. 136.—Shaw, Gen. Zool., vol. x. p. 152, pl. 17.—Lath. Gen. Hist., vol. vii. p. 342, pl. cxv.

Ægotheles Novæ-Hollandiæ, Vig. and Horsf. in Linn. Trans., vol. xv. p. 197.—De la Fresn. in Guerin, Mag. de Zool. 1838, p. 21, pl. 82.

—*lunulatus*, Jard. and Selby, Ill. Orn., vol. iii. pl. 149.

—*Australis*, Swains. Class. of Birds, vol. ii. p. 338.

—*cristatus*, G. R. Gray, List of Gen. of Birds, p. 7.

Little Mawepawk, Colonists of Van Diemen's Land. *Teringing*, Aborigines of the coast of New South Wales.

THIS very interesting little Nightjar is subject to great variation in the colour and markings of its plumage, a circumstance which has tended to produce much confusion, and greatly to increase the list of synonyms.

It possesses a great range of habitat, being found in every part of Van Diemen's Land, and throughout the southern portion of Australia, from Swan River on the western coast to Moreton Bay on the eastern; time, and the continued exploration of that vast country, can alone determine how far it may be found to the northward: it is a stationary species, inhabiting alike the densest brushes near the coast, and the more thinly-wooded districts of the interior.

While rambling in the Australian forests I had the good fortune to meet with more than an ordinary number of specimens of this curious bird. I also procured its eggs, and considerable information respecting its habits and actions, which differ most remarkably from those of the true *Caprimulgidæ*, and on the other hand assimilate so closely to the smaller Owls, particularly those comprised in the genus *Athene*, as to form as perfect an analogical representative of that group of birds as can possibly be imagined, for which reason the English name of Owlet Nightjar has been assigned to it.

During the day it resorts to the hollow branches or spouts as they are called, and the holes of the gum-trees, sallying forth as night approaches in quest of insects, particularly the smaller *Coleoptera*, upon which it chiefly subsists. Its flight is straight, and not characterized by the sudden turns and descents of *Caprimulgus*. On driving it from its haunts I have sometimes observed it to fly direct to a similar hole in another tree, but more frequently to alight on a neighbouring branch, perching across and never parallel to it. When assailed in its retreat it emits a loud hissing noise, and has the same stooping motion of the head observable in the Owls; it also resembles that tribe of birds in its erect carriage, the manner in which it sets out the feathers round the ears and neck, and in the power it possesses of turning the head in every direction, even over the back, a habit it is constantly practising. A pair I had for some time in captivity were frequently leaping to the top of the cage, and had a singular mode of running or shuffling backwards to one corner of it.

While traversing the woods, the usual mode of ascertaining its presence is by tapping with a stone or a tomahawk at the base of the hollow trees, when the little inmate, as represented in the upper figure of our Plate, will almost invariably ascend to the outlet and peep over to ascertain the cause of disturbance. If the tree be lofty or its hole inaccessible, it will frequently retire again to its hiding-place, and there remain until the annoyance be repeated, when it flies off to a place of greater security. In these holes, without forming any nest, it deposits its eggs, which are four or five in number, perfectly white, nearly round, and about one inch and a line in length and eleven lines in breadth. At least two broods are reared by each pair of birds during the year. I have known the young to be taken in Van Diemen's Land in October, and in New South Wales I have procured eggs in January.

Specimens from Van Diemen's Land, Swan River, South Australia, and New South Wales, all present considerable difference in the colour and markings of the plumage, but none of sufficient importance to justify their separation into distinct species: in some the nuchal band and the circular mark on the head are very conspicuous, while in others scarcely a trace of these markings is observable; these variations do not depend upon habitat, but are constantly found in specimens from the same localities.

Little or no difference is apparent in the size or plumage of the sexes.

Adults have the patches above the eyes, a semilunar mark at the back of the head, a band round the neck, and all the under surface grey, finely sprinkled with black, and tinged with buff; ear-coverts reddish buff, the remainder of the head blackish brown; all the upper surface and wings dark brown, sprinkled with grey in the form of irregular bars; primaries brown, sprinkled on their outer webs with lighter brown and grey; tail dark, regularly barred with numerous narrow lines of grey sprinkled with black: irides hazel; feet flesh colour.

In immature birds the lunulate markings are much richer in colour and more distinct than in the adults, in many of which they are nearly obliterated, and the irides are nearly black.

The figures are of the natural size.



RED THROATED LOQUAX. *Coccyzus Corax*.

after Aud. and Vieillot. Richer del. et lith.

C. Hallman del. Imp.

ÆGOTHELES LEUCOGASTER, *Gould.*

White-bellied Owlet-Nightjar.

Ægotheles leucogaster, Gould in Proc. of Zool. Soc., June 25, 1844.

THIS is altogether a larger and more powerful bird than the *Ægotheles Novæ-Hollandiæ*; besides which, the white colouring of the lower part of the belly will at all times serve to distinguish it from that species.

It is rather abundant on the Cobourg Peninsula, where it inhabits the forests in the immediate vicinity of Port Essington; how far its range may extend is at present unknown, but it is probable that the bird is distributed over the whole of the northern portion of the continent, and that it there forms the representative of the *Æ. Novæ-Hollandiæ*, which up to the present time has only been found on the southern.

Mr. Gilbert states that it is abundant in most parts of the settlement at Port Essington, "where it is frequently seen flying about at twilight, and occasionally during the day. On the approach of an intruder it flies very heavily from tree to tree, and on alighting invariably turns round on the branch to watch his approach, moving the head all the time after the manner of the Hawk tribe."

The sexes when fully adult will not I expect be found to differ in plumage. I attribute the redness of some of my specimens to the age of the individuals; but whether the red varieties or the grey are the most mature birds, I have not had sufficient opportunities of ascertaining.

It feeds on insects of all kinds, and as the bird is strictly nocturnal in its habits, they are, as a matter of course, procured at night.

Head black; the crown, a lunar-shaped mark at the back of the head, and a collar surrounding the back of the neck freckled with grey; back freckled black and white; wings brown, crossed by numerous bands of lighter brown freckled with dark brown; primaries margined externally with buff, interrupted with blotchings of dark brown; tail dark brown, crossed by numerous broad irregular bands of reddish buff freckled with dark brown; ear-coverts straw-white; chin, abdomen and under tail-coverts white; breast and sides of the neck white, crossed by numerous freckled bars of black; irides dark brown; upper mandible dark olive-brown, lower mandible white with a black tip; legs very pale yellow; claws black.

The figures are of the natural size.



PODARGUS HUMERALIS: Vig. & Horsf.

PODARGUS HUMERALIS, *Vig. and Horsf.*

Tawny-shouldered Podargus.

Caprimulgus gracilis? Lath. Ind. Orn. Supp., p. 58.

Gracile Goatsucker? Ib. Gen. Syn. Supp., vol. ii. p. 263.—Steph. Cont. of Shaw's Zool., vol. x. p. 145.—Lath. Gen. Hist., vol. vii. p. 344.

Podargus? *gracilis*? Steph. Cont. of Shaw's Zool., vol. xiii. p. 93.

Podargus Australis? Ib., vol. xiii. p. 92.

Podargus cinereus? Cuv. Règn. Anim., pl. 4. fig. 1.—Vieill. Nouv. Dict. d'Hist. Nat., tom. xxvii. p. 151. pl. G. 37. fig. 3.—Vieill. Ency. Méth., p. 547.

Cold-River Goatsucker, Lath. Gen. Hist., vol. vii. p. 369.

Podargus Humeralis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 198.—Jard. and Selb. Ill. Orn., vol. ii. pl. 88.—Swains. Class. of Birds, vol. ii. p. 338.

So great a similarity reigns throughout the *Podargi* inhabiting Australia, that it is most difficult to distinguish them; and after a minute examination of a great number of specimens it appears to me that there are five species, only two of which are inhabitants of New South Wales, and to these, in my opinion, the various names of the older authors are referrible. But as it must ever remain a matter of uncertainty as to which these names have been applied, I have preferred to retain for the present bird that proposed by Messrs. Vigors and Horsfield.

The Tawny-shouldered Podargus may be distinguished by the greater breadth of its markings, by the decided admixture of tawny in its colouring, by the feathers of the head having a small round spot of white at the tip, and by the more boldly-marked tips of the coverts. It is plentifully dispersed over New South Wales, where it is not restricted to any peculiar character of country, but inhabits alike the thick brushes near the coast, the hilly districts, and the thinly-wooded plains of the interior. I found it breeding on the low swampy islands studding the mouth of the Hunter, and on the Apple-tree (*Angophora*) flats of Yarrundi, near the Liverpool Range. In their habits and mode of life the *Podargi* differ very considerably from the true Nightjars, and also in many particulars from *Ægotheles*.

Like the rest of the genus, the Tawny-shouldered Podargus is strictly nocturnal, sleeping throughout the day on the dead branch of a tree, in an upright position across, and never parallel to, the branch, and which it so nearly resembles as scarcely to be distinguishable from it. I have occasionally seen it beneath the thick foliage of the *Casuarinæ*, and I have been informed that it sometimes shelters itself in the hollow trunks of the *Eucalypti*, but I could never detect one in such a situation; I mostly found them in pairs, perched near each other on the branches of the gums, in situations not at all sheltered from the beams of the midday sun. So lethargic are its slumbers, that it is almost impossible to arouse it, and I have frequently shot one without disturbing its mate sitting close by; it may also be knocked off with sticks or stones, and sometimes is even taken with the hand: when aroused, it flies lazily off with heavy flapping wings to a neighbouring tree, and again resumes its slumbers until the approach of evening, when it becomes as animated and active as it had been previously dull and stupid. The food consists of insects of various kinds; but in what way they are obtained is uncertain, though the contents of the stomach of one I dissected induce me to believe that it does not usually capture its prey while on the wing, or subsist upon nocturnal insects alone, but that it is in the habit of creeping among the branches in search of such as are in a state of repose; and an examination of the tail will, I think, serve to strengthen this supposition, since it in some degree resembles the form and structure of that organ in many of the climbing birds. The power it possesses of shifting the position of the outer toe backwards, as circumstances may require, is a very singular feature, and may also tend to assist them in their progress among the branches. A bird I shot at Yarrundi, in the middle of the night, had the stomach filled with fresh-captured mantis and locusts (*Phasmidæ* and *Cicadæ*), which never move at night, and the latter of which are generally resting against the upright boles of the trees. In other specimens I found the remains of small *Coleoptera*, intermingled with the fibres of the roots of what appeared to be a parasitic plant, such as would be found in decayed and hollow trees. The whole contour of the bird shows that it is not formed for extensive flight or for performing those rapid evolutions that are necessary for the capture of its prey in the air, the wing being short and concave in comparison with those of the true aerial Nightjars, and particularly with the Australian form to which I have given the name of *Eurostopodus*.

Of its mode of nidification I can speak with confidence, having seen many pairs breeding during my rambles in the woods. It makes a slightly-constructed flat nest of sticks carelessly interwoven together, and placed at the fork of a horizontal branch of sufficient size to ensure its safety; the tree most frequently chosen is an *Eucalyptus*, but I have occasionally seen the nest on an Apple-tree (*Angophora*) or a Swamp-Oak (*Casuarina*). In every instance one of the birds was sitting on the eggs and the other perched

on a neighbouring bough, both invariably asleep; that the male participates in the duty of incubation I ascertained by having accidentally shot a bird on the nest without being aware it was so occupied, which on dissection proved to be a male. The eggs are generally two in number, of a beautiful immaculate white, and of a long oval form, one inch and ten lines in length by one inch and three lines in diameter.

The sexes so closely resemble each other both in size and plumage, that a separate description is unnecessary. Like the other species of the genus, it is subject to considerable variation in its colouring; the young, which assume the adult livery at an early age, being somewhat darker in all their markings.

The night-call of this species is a loud hoarse noise, consisting of two distinct sounds, which cannot be correctly described.

The stomach is thick and muscular, and is lined with a thick hair-like substance like that of the Common Cuckoo.

All the upper surface brown, speckled with greyish white and darker brown, the feathers of the crown having a blackish brown stripe down the centre terminating in a minute spot of white; wings similar to the upper surface, but lighter and with bolder black and buff spots, the coverts having an irregular spot of white and tawny on the outer web near the tip, which, as they lie over each other, form indistinct bands across the wing; primaries brownish black, with light-coloured shafts, and with a series of whitish spots on the outer webs, between which they are margined with tawny; their inner webs irregularly barred with the same; tail tawny brown, sprinkled with lighter brown, and crossed with a series of irregular bands of blackish brown, sprinkled with dusky white, each feather having a spot of brownish black near the extremity, and tipped with white; face and all the under surface greyish white, crossed by numerous narrow and irregular bars of tawny, and with a stripe of brown down the centre of each feather, the latter colour being most conspicuous and forming a kind of semilunar mark down each side of the chest; bill light brown, tinged with purple; inside of the mouth pale yellow; tongue long, transparent, and of the same colour with the inside of the mouth; irides brownish orange; feet light brownish olive.

In some the rich tawny colour predominates, while others are more grey.

The bird is represented of the natural size, asleep, in the position it is usually seen during the day.



PODARGUS CUVIERI, *Vig. and Horsf.*

Cuvier's Podargus.

Podargus Cuvieri, Vig. and Horsf. in Linn. Trans., vol. xv. p. 200.

More-pork of the Colonists.

THIS species is readily distinguished from the *Podargus humeralis* by the bill being much less robust and of a more adpressed form, while the culmen is sharp and elevated; the bird itself is also of a smaller size and altogether more slender than its near ally. Van Diemen's Land, if not its exclusive habitat, is certainly its great stronghold, it being there very numerous, as evidenced by the frequency with which I encountered it during my rambles in the woods; and its distribution over the island is so general, that to particularize localities in which it may be found is quite unnecessary, it being equally abundant near the coast as well as in the interior. I observed it both among the thick branches of the *Casuarinæ* and on the dead limbs of the *Eucalypti*; it appeared however to evince a greater partiality for the latter, which it closely resembles in colour, and from the position in which it rests, looks so like a part of the branch itself as frequently to elude detection; it is generally seen in pairs sitting near each other, and frequently on the same branch. Like the other members of the genus, this bird feeds almost exclusively on insects, of which Coleoptera form a great part: it is strictly nocturnal in its habits, and although not so active as the true *Caprimulgi*, displays considerable alertness in the capture of its food, presenting a striking contrast to its inertness in the day-time, when it is so drowsy that it can scarcely be aroused from its slumbers; that portion of its existence being passed in a sitting posture across a dead branch, perfectly motionless and with the bill pointing upwards: it never flies by day unless roused from the branch on which it is sitting, and this is not easily effected, as neither the discharge of a gun nor any other noise will cause it to take wing. It is frequently captured and kept in captivity, where it excites attention more from the sluggishness of its nature and the singular position it assumes than from any other cause: raw meat forms a suitable substitute for its natural food. In captivity it will pass the entire day in sleep on the back of a chair or any other piece of furniture on which it can perch. Like the owl, it is considered by some a bird of ill omen, principally from the extraordinary sound of its hoarse, unearthly cry, which resembles the words *more-pork*; it not only approaches the immediate vicinity of the houses, but emits this sound while perched in their verandahs and on the buildings themselves; and it is often to be seen perched on the tombstones of the churchyard.

It builds a somewhat neatly-formed flat nest, about seven inches in diameter, in the fork of an horizontal branch; the exterior formed of small sticks, and the interior of the fibrous portions of various plants; the eggs are white, and nearly of a true oval in form, being one inch and nine lines long by one inch and three lines broad.

Considerable variation occurs in the colouring of individuals, the prevailing tint being a dull ashy grey, while others are of a rich chestnut hue; but whether this be indicative of immaturity, or characteristic of the fully adult plumage, I have not been able to satisfy myself. The figures represent both these styles of colouring.

Lores brown, each feather tipped with mealy white, forming a line before and above the eye; feathers of the forehead mealy white, blending into the dull ashy grey of the head and back, all the feathers of which have a stripe of blackish brown down the centre, terminating in a small spot of white, and are moreover minutely freckled with greyish white and dark brown; wing-coverts chestnut, each tipped with an oval spot of white bounded posteriorly with black, forming a line across the wing; remainder of the wing brown, mottled with greyish white, arranged, particularly on the primaries, in the form of irregular bars; scapularies washed with buff and with a broad stripe of blackish brown down the centre; under surface brownish grey, minutely freckled with white, and with a narrow line of blackish brown down the centre; sides of the neck washed with chestnut; tail-grey, minutely freckled with greyish white and black, assuming the form of broad irregular bands, each feather with a small spot of white at the tip; irides varying from yellow to reddish yellow and hazel; feet olive-brown.

Other examples have the general tint rich chestnut-brown, with all the markings larger and more decided.

The figures are of the natural size.



PODARGUS PHALAENOIDES: Gould.

PODARGUS PHALÆNOIDES, *Gould.*

Moth-plumaged Podargus.

Podargus Phalænoides, Gould in Proc. of Zool. Soc., Part VII. p. 142.

Ny-ane? and *In-ner-jin-ert*, Aborigines of the neighbourhood of Port Essington.

THE present bird, which is from Port Essington, may be readily distinguished from every other Australian species of *Podargus* by its small size, by the beautiful, delicate, and moth-like painting of its plumage, and by the colouring of the thighs, which are light brown instead of black; its tail also is rather more lengthened than that of the common species. Like the members of the genus inhabiting Van Diemen's Land and New South Wales, it exhibits considerable variation in size and colouring; in some a rusty red tint pervades the whole plumage, while in others no trace of this hue occurs. I am inclined to consider that age has much to do with this variation in colour: but whether the red-tinted birds are immature or adult I have had no means of ascertaining; further observation is necessary to determine this point; and I consequently hope the subject will not be neglected by those who may have an opportunity of observing the bird alive: the red-tinted birds occur less frequently than the others.

I have several specimens from the north-west coast of Australia, and Mr. Gilbert states that it is abundant in every part of the Coburg Peninsula.

Like the rest of the genus it is strictly nocturnal in its habits; becoming animated at the approach of evening, it sallies forth from the favourite branch where it has rested during the day in search of insects, which, I believe, constitute almost exclusively its food; its whole economy in fact, so far as known, so closely resembles that of the *Podargus humeralis*, that one description would serve for both.

Forehead, sides of the face and all the under surface brownish grey, minutely freckled with black; the feathers of the under surface with a stripe of blackish brown down the centre, these stripes being broadest and most conspicuous on the sides of the chest; all the upper surface brown, minutely freckled with grey, each feather with a broad stripe of black down the centre; shoulders dark brown; coverts freckled with greyish white and with a spot of white, the centre of which is fawn-colour at the tip; primaries dark brown, crossed on their outer webs with an irregular bar of white, the interspaces on the outer primaries rufous; inner webs of the primaries crossed by irregular bands of freckled brown and fawn-colour; tail brown, crossed by numerous broad bands of freckled grey, bounded on either side by irregular blotchings of black; irides orange or reddish hazel; bill horn-colour.

In the other state, to which I have alluded, the whole of the upper surface is of a dark rust-red, freckled on the forehead, wing-coverts and scapularies with white; the bands on the tail less apparent; a rufous tint pervades the grey of the under surface, and the striæ are much narrower than in the specimen above described.

The Plate represents a male and a female, in the differently tinted plumage, of the natural size.



PODARGUS PLUMIFERUS: *Gould.*

PODARGUS PLUMIFERUS, *Gould.*

Plumed Podargus.

Podargus plumiferus, Gould in Proc. of Zool. Soc., Part XIII. p. 104.

THE only information I have to communicate respecting this beautiful Podargus, is, that it is a native of the brushes of the Clarence and neighbouring rivers in New South Wales, and that several examples have come under my notice, of which one is deposited in the Museum at Dublin, another in the Museum at Manchester, and two are contained in my own collection; of the latter, one was sent to me by Mr. Strange of Sydney, and the other was purchased with other Australian birds in London. It is readily distinguished from all the other Australian members of the genus by the more lengthened form of tail, and by the remarkable and conspicuous tufts of feathers which spring from immediately above the nostrils: considerable variation is found to exist in the colouring of the various specimens, some being much redder than the others, and having the markings on the under surface much less distinct and of a more chestnut tint.

Nothing whatever is known of its habits and economy, points which must remain for future discovery and research to make known.

Tuft of feathers covering the nostrils alternately banded with blackish brown and white; all the upper surface mottled brown, black, and brownish white, the latter predominating over each eye, where it forms a conspicuous patch; the markings are of a larger but similar kind on the wings, and on the primaries and secondaries assume the form of bars; tail similar but paler, and with the barred form of the markings still more distinct; centre of the throat and chest brownish white, minutely freckled with brown; sides of the neck and breast, and all the under surface similar, but with a dark line of brown down the centre, and two large nearly square-shaped spots of brownish white near the tip of each feather; bill and feet horn-colour.

The figures are of the natural size.



EUROSTOPODUS ALBOCULATUS.

J. Gould and H. C. Richter del.

C. Bullock del. Imp.

EUROSTOPODUS ALBOGULARIS.

White-throated Goat-sucker.

Caprimulgus albogularis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 194, note.

———— *mystacalis*, Temm. Pl. Col. 410.

DURING my visit to Australia I had opportunities of observing a number of this species ; it is still, however, a rare bird in all our collections, and how far it may range over the Australian continent is not known ; the south-eastern are the only portions in which it has yet been discovered ; and although all the specimens I have seen in collections were procured at Moreton Bay, I have killed three or four of an evening on the cleared lands on the Upper Hunter, which shows that it is far from being a scarce bird in that part of New South Wales. In all probability it is only a summer visitant in the colony, as it was at this season only that I observed it. In the daytime it sleeps on the ground on some dry knoll or open part of the forest, and as twilight approaches sallies forth to the open glades and small plains or cleared lands in search of insects ; its flight, which is much more powerful than that of any other Goatsucker I have seen, enabling it to pass through the air with great rapidity, and to mount up and dart down almost at right angles whenever an insect comes within the range of its eye, which is so large and full that its powers of vision must be very great. Most of those I shot were gorged with insects, principally coleoptera and locusts, some of which were entire and so large as to excite surprise how they could be swallowed ; in several instances they were so perfect, that I preserved them as specimens for my entomological collection.

Of its nidification I have no information to furnish ; it doubtless, however, breeds on the ground, and judging from analogy its eggs will be found to be either one or two in number, and in form and colour partaking of the character of those of *Caprimulgus*, and not of those of *Podargus* and *Ægotheles*.

Contrary to what might have been expected, I found that although the sexes are nearly alike in colour, the females always exceed the males in size and in the brilliance of the tints ; the males, on the other hand, have the two white spots on the third and fourth primaries more conspicuous than in the female.

All the upper surface very minutely freckled grey and brown ; the feathers on the crown of the head and at the occiput with a large patch of black down the centre ; behind the ear-coverts a patch of dark brown sprinkled with brownish buff ; from the angle of the mouth passing round the back of the neck an indistinct collar of intermingled buff, chestnut and black ; scapularies variegated with dark brown on their outer webs and margined with bright fulvous ; wing dark brown variegated with fulvous and grey ; secondaries dark brown, with a regular series of bright fulvous spots along each web ; primaries blackish brown, the two first without any spot, the remainder spotted like the secondaries, the third having a spot of white on its inner and outer web about the centre of the feather, the fourth with a large white spot on its outer web ; two centre and outer webs of the remaining tail-feathers dark brown, marbled with irregular bars of grey ; the inner webs of the lateral feathers dark brown, crossed with irregular bands of light buff ; throat blackish brown, spotted with bright buff ; on each side of the throat a large oval spot of white ; breast dark brown, spotted above with dull buff, and broadly freckled with dull buff and grey ; abdomen and under tail-coverts bright fulvous, crossed with bars of dark brown ; irides dark brown ; feet mealy reddish brown.

The Plate represents a female of the natural size.



J. Gould and H.C. Richter del.

EUROSTOPODUS GUTTATUS.

C. Hullmandel. Imp.

EUROSTOPODUS GUTTATUS.

Spotted Goat-sucker.

Caprimulgus guttatus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 192.

Kal-ga, Aborigines of the lowland districts of Western Australia.

Goatsucker, of the Colonists.

As the similitude of its form would lead us to suspect, this species closely resembles the preceding, both in its habits and in the whole of its economy; unlike that species, however, whose range of habitat would appear to be very limited, the present bird is universally, but thinly, distributed over the whole of the southern portion of Australia. I killed it in South Australia and in New South Wales; the collection formed by Mr. Gilbert at Swan River also contained specimens which presented no difference whatever, either in size or markings.

I more than once flushed this bird in open day, when, after mounting rapidly in the air, it performed a few zigzag evolutions and pitched again to the earth at a distant spot. That it breeds on the ground there can be no doubt, as I found a newly hatched young one on the precise spot from which I had flushed the adult; the little helpless creature, which much resembled a small mass of down or wool, was of a reddish brown colour, not very dissimilar from the surface of the ground where it had been hatched: my utmost endeavours to find the broken shell were entirely unavailing; I am consequently unable to describe the egg, or to furnish any further information respecting the nidification of this singular form.

The sexes are so nearly alike in colour and size that they are not to be distinguished except by dissection; the young, on the contrary, is clothed in a more buffy brown dress until it has attained the size of the adult.

Forehead and centre of the head brownish black, each feather spotted and margined with bright buff; over each eye the feathers are pearly white very finely pencilled with brownish black; lores and sides of the face brown spotted with buff; collar at the back of the head reddish chestnut; back grey freckled with black; scapularies light grey freckled with brownish black, largely tipped with bright buff, with an irregular diagonal patch of black; wing-coverts grey, spotted and freckled with brown, each feather largely tipped with bright buff; primaries and secondaries brownish black, marked on both webs with buff, the buff on the outer webs being in the form of round spots, on the inner webs irregular bars; on the inner web of the first primary is a large spot of pure white, on the second primaries a similar but larger spot, and a small one on the outer web; the third and fourth crossed by a large irregular patch of white; middle tail-feathers light grey, marbled and finely freckled with dark brown; lateral feathers light grey barred with blackish brown and bright buff, and freckled with dark brown, the buff on the outer web of the outside feather forming a regular row of spots; on each side of the throat an oblique line of white; chest dark brown, each feather broadly barred and spotted with light buff; abdomen bright buff, finely and irregularly barred with black; under tail-coverts sandy; bill black; irides very dark brown; feet mealy reddish brown.

The Plate represents an adult male and a young bird of the natural size.



CNETHULGUS MACRURUS; Horsf.

J. Gould and B.C. Richter del et lith.

C. Hollman del. Imp.

CAPRIMULGUS MACRURUS, *Horsf.*

Large-tailed Goatsucker.

Caprimulgus macrurus, Horsf. in Linn. Trans., vol. xiii. p. 142.

THIS, the only true *Caprimulgus* known to inhabit Australia, is I believe identical with the *C. macrurus* of Dr. Horsfield, whose specimens were procured in Java, while those I possess were obtained at Port Essington, where the bird is moderately plentiful; hence it would appear that it has an unusually wide range of habitat. It inhabits the open parts of the forest and is strictly nocturnal; it mostly rests on the ground on the shady side of a large tree close to the roots, and if disturbed several times in succession takes to the branch of one of the largest trees. I have never seen the eggs of this species, but I possess a young bird apparently only a few days old, which Mr. Gilbert found lying under a shrubby tree, without any nest or even a blade of grass near it; the little creature was so similar in colour to that of the ground upon which it was lying, that it was with difficulty detected, and Mr. Gilbert was only induced to search for it from the very peculiar manner in which the old bird rose, the reluctance it evinced to leave the spot, and its hovering over the place it had risen from, instead of flying off to the distance of nearly a hundred yards, as it usually does.

The sexes are distinguished from each other by the greater extent of the white mark on the primaries and outer tail-feathers; in other parts of the plumage and in size there is no difference.

Its food consists of moths, flies and coleopterous insects, which are taken during flight.

Head brownish grey, very minutely freckled with black; the feathers down the middle of the head and occiput with a large broad stripe of black down the centre; lores, space surrounding the eyes and ear-coverts reddish brown; on each side of the neck a broad stripe of rich buff barred with black; a narrow line of white passes below the angle of the mouth; chin brown; across the throat a band of white bounded below by black, the extremities of the white feathers being of that hue; centre of the back dark brown, freckled with black and buff; shoulders blackish brown; wing-coverts freckled grey, buff and black, each with a large spot of buff at the tip; primaries and secondaries blackish brown, the former crossed at their base, and the latter throughout their entire length, with reddish buff; the second and third primaries crossed near their base with a broad band of white, stained with buff on the outer margin; the first primary with a spot of white only on the margin of the inner web; the first three primaries freckled at their tips, and the remainder for the entire length of their inner webs with brownish grey; scapularies freckled grey and brown, with a large patch of deep dull black on their outer webs, margined externally with buff; rump freckled with dark brown and grey, and with an interrupted line of darker brown down the centre of each feather; two centre tail-feathers minutely and coarsely freckled with very dark brown; the next on each side very dark brown, crossed by irregular bands of freckled brownish grey and black; the next on each side similar, but the bands narrower and less conspicuous; the two outer ones on each side very dark brown for three parts of the length, the apical portion being white, stained with freckled buff and black on the outer webs; the basal or dark portion crossed by narrow indistinct and irregular bars of deep buff; breast freckled buff, grey and brown, some of the feathers in the centre of the breast largely tipped with buff; abdomen and under tail-coverts deep buff, crossed by narrow regular bands of dark brown; irides blackish brown; bill black; feet and claws reddish brown.

The Plate represents a male and a female of the natural size.



ACANTHYLIS CAUDACUTA.

Australian Spine-tailed Swallow.

- Hirundo caudacuta*, Lath. Ind. Orn. Supp., p. 57. sp. 1.—Lath. Gen. Hist., vol. vii. p. 307.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xiv. p. 535; and Ency. Méth. Orn., Part II. p. 531.
- Needle-tailed Swallow?* Lath. Gen. Syn. Supp., vol. ii. p. 307.—Steph. Cont. Shaw's Gen. Zool., vol. x. p. 133.
- Pin-tailed Swallow*, Lath. Gen. Hist., vol. vii. p. 308.
- Chætura Australis*, Steph. Cont. Shaw's Gen. Zool., vol. xiii. p. 76.
- Hirundo pacifica*, Lath. Ind. Orn. Supp., p. 58.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xiv. p. 511; and Ency. Méth. Orn., Part II. p. 529.
- New Holland Swallow?* Lath. Gen. Syn. Supp., vol. ii. p. 259.—Steph. Cont. Shaw's Gen. Zool., vol. x. p. 132.—Lath. Gen. Hist., vol. vii. p. 308.
- Chætura macroptera*, Swains. Zool. Ill. 2nd Ser., pl. 42.—Gould, Birds of Australia, Part II. cancelled.
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THIS noble species, the largest of the *Hirundinidæ* yet discovered, is a summer visitant of the eastern portions of Australia, proceeding as far south as Van Diemen's Land; but its visits to this island are not so regular as to New South Wales, and its stay in these southern latitudes is never protracted. The months of January and February are those in which it has been most frequently observed in Van Diemen's Land, where it simultaneously appears in large flocks, which after spending a few days disappear as suddenly as they arrived. I am not aware of its having been observed in Western Australia, neither has it occurred in any of the collections formed at Port Essington.

The keel or breast-bone of this species is more than ordinarily deep, and the pectoral muscles more developed than in any other bird of its weight with which I am acquainted. Its whole form is especially and beautifully adapted for aerial progression, and as its lengthened wings would lead us to imagine, its power of flight, both for rapidity and extension, is truly amazing; hence it readily passes from one part of the country to another, and if so disposed may be engaged in hawking for flies on the continent of Australia at one moment, and in half an hour be similarly employed in Van Diemen's Land.

So exclusively is this bird a tenant of the air, that I never in any instance saw it perch, and but rarely sufficiently near the earth to admit of a successful shot; it is only late in the evening and during lowery weather that such an object can be accomplished. With the exception of the Crane, it is certainly the most lofty as well as the most vigorous flier of the Australian birds. I have frequently observed in the middle of the hottest days, while lying prostrate on the ground with my eyes directed upwards, the cloudless blue sky peopled at an immense elevation by hundreds of these birds, performing extensive curves and sweeping flights, doubtless attracted thither by the insects that soar aloft during serene weather; hence, as I have before stated, few birds are more difficult to obtain, particularly on the continent of Australia, where long droughts are so prevalent; on the contrary, the flocks that visit the more humid climate of Van Diemen's Land, where they necessarily seek their food near the earth, are often greatly diminished by the gun during their stay.

I regret that I could ascertain no particulars whatever respecting the nidification of this fine bird, but we may naturally conclude that both rocks and holes in the larger trees are selected as sites for the purpose, as well as for a roosting-place during the night. Before retiring to roost, which it does immediately after the sun has gone down, the Spine-tailed Swallow may frequently be seen, either singly or in pairs, sweeping up the gullies or flying with immense rapidity just above the tops of the trees, their never-tiring wings enabling them to perform their evolutions in the capture of insects, and of sustaining themselves in the air during the entire day, without cessation.

The sexes offer no perceptible difference in their outward appearance; but the female, as is the case with the other members of the family, is a trifle smaller than her mate.

Crown of the head, back of the neck, and ear-coverts deep shining green strongly tinged with brown; a small space immediately before the eye deep velvety black; band across the forehead, throat, inner webs of the secondaries nearest the back, a patch on the lower part of the flanks and the under tail-coverts white; wings and tail deep shining green, with purple reflexions; centre of the back greyish brown, becoming darker towards the rump; chest and abdomen dark clove-brown; bill black; feet brown.

The figures are those of the male and female of the natural size.



CYPSELUS AUSTRALIS: Gould

CYPSELUS AUSTRALIS, *Gould.*

Australian Swift.

Cypselus Australis, Gould in Proc. of Zool. Soc., Part VII. p. 141.

As I had never seen or heard of a true Swift in Australia, I was no less surprised than gratified when I discovered this species to be tolerably numerous on the Upper Hunter, during my first visit to that district in 1838. Those I then observed were flying high in the air and performing immense sweeps and circles, while engaged in the capture of insects. I succeeded in killing six or eight individuals, among which were adult examples of both sexes, but I was unable to obtain any particulars as to their habits and economy. It would be highly interesting to know whether this bird, like the other members of the family, returns annually to spend the months of summer in Australia. I think it likely that this may be the case, and that it may have been frequently confounded with the *Acanthylis caudacuta*, as I have more than once seen the two species united in flocks, hawking together in the cloudless skies, like the Martins and Swallows of our own island. By the discovery of this bird another beautiful instance of representation is brought under our notice; evincing most clearly that the Australian Swift, Swallow and Martin are representatives of the Swift, Swallow and Martin of Europe, each performing in their respective hemispheres similar offices in the great scheme of nature.

Throat and rump white; upper and under surface of the body brown; the back tinged with a bronzy metallic lustre; each feather of the under surface margined with white; wings and tail dark brown; irides, bill and feet black.

The figures are those of a male and a female of the natural size.



ATTILORA LEUCOSTERNON: Gould.

ATTICORA LEUCOSTERNON, *Gould.*

White-breasted Swallow.

Hirundo leucosternus, Gould in Proc. of Zool. Soc., Part VIII. p. 172.

Boo-de-boo-de of the Aborigines of the mountain districts of Western Australia.

Black and White Swallow of the Colonists.

For the present I have placed this new and elegant Swallow with the members of the genus *Atticora*; the type of which is the *Hirundo fasciata* of authors, a bird inhabiting South America, from which country I have seen two species, while South Africa presents us with a third; the present, therefore, may be considered as the representative of the genus in Australia, thus further evidencing that beautiful law of representation alluded to in the page on *Cypselus Australis* respecting the Swift, Swallow and Martin.

I have never myself seen this bird; the specimen from which my original description was taken was presented to me in 1839 by Mr. Charles Coxen, who had killed it some years before, and who informed me that it was one of a pair that he observed flying over a small lake in the neighbourhood of the Lower Namoi; its companion was not procured.

The second example was killed at Swan River, where Mr. Gilbert in his notes from Western Australia says, "I only observed this bird in the interior, and as far as I can learn, it has not been seen to the westward of York: I am told it is merely a summer visitor. It is a very wandering species, never very numerous, and is generally seen in small flocks of from ten to twenty in number, flying about, sometimes in company with the other Swallows, for about ten minutes, and then flying right away; I noticed this singular habit every time I had an opportunity of observing the species. It usually flies very high, a circumstance which renders it difficult to procure specimens.

"Its flight more nearly resembles that of the Swift than that of the Swallow; its cry also, at times, very much resembles that of the former.

"Its food principally consists of minute black flies.

"This bird chooses for its nest the deserted hole of either the Dalgyte (*Perameles lagotis*) or the Boodee (a species of *Bettongia*), in the side of which it burrows for about seven or nine inches in a horizontal direction, making no nest, but merely laying its eggs on the bare sand."

Crown of the head light brown, surrounded by a ring of white; lores black; a broad band commencing at the eye, and passing round the back of the neck, brown; centre of the back, throat, chest and under surface of the shoulder white; wings and tail brownish black; rump, upper tail-coverts, abdomen and under tail-coverts black; irides dark reddish brown; bill blackish brown; legs and feet greenish grey.

The figures are of the natural size.



HIRUNDO NEOXENA: Gould.

HIRUNDO NEOXENA, *Gould.*

Welcome Swallow.

Hirundo Javanica, Vig. and Horsf. in Linn. Trans., vol. xv. p. 191.

New Holland Swallow, Griffith's Edit. Cuv. Anim. King., Aves, vol. vii. p. 96; and *H. pacifica*, Ibid., pl. not numbered.

Kun-na-meet, Aborigines of the lowland districts of Western Australia.

Ber-rin-nin, Aborigines of New South Wales.

LIKE many other Australian birds, this species has been considered to be identical with another or others described by the older writers. Messrs. Vigors and Horsfield, in their "List of Australian Birds," published in the fifteenth volume of the Linnean Transactions, state that they "have been led into a more detailed description of this species, in order to point out the differences of its characters from those of our European species *Hir. rustica*, with which it has been generally confounded;" but while they have very clearly pointed out the distinctive characters of the two species, they have, in my opinion, departed from their usual accuracy in considering it to be identical with the bird figured by Sparmann in the "Museum Carlsonianum" under the name of *Hirundo Javanica*, which is there represented with a square tail, and which, if drawn correctly, is not only specifically but generically distinct. I have also compared specimens of the Australian Swallow with the *Hirondelle Orientale* of M. Temminck's "Planches Coloriées," with which species it was likewise considered to be identical by Messrs. Vigors and Horsfield, but from which also I conceive it to be distinct. On the contrary, the Swallow figured in Griffith's edition of Cuvier's "Animal Kingdom" is certainly the Australian bird; but as the specific term there given had been previously employed by Sparmann, as mentioned above, the necessity of a new name for the present species has been forced upon me; and that of *neoxena* has suggested itself as appropriate, from the circumstance of its appearance throughout the whole of the southern portions of Australia being hailed as a welcome indication of the approach of spring, and its arrival there associated with precisely the same ideas as those popularly entertained respecting our own pretty Swallow in Europe. The two species are in fact beautiful representatives of each other, and assimilate not only in their migratory movements, but also most closely in their whole habits, actions and economy. It arrives in Van Diemen's Land about the middle or end of September, and after rearing at least two broods departs again northwards in March; but it is evident that the migratory movement of the Swallow, and doubtless that of all other birds, is regulated entirely by the temperature and the more or less abundant supply of food necessary for its existence; for I found that in New South Wales, and every country in Australia within the same latitude, it arrived much earlier and departed considerably later than in Van Diemen's Land; and Mr. Caley, who resided in New South Wales for several years, and whose valuable notes on the birds of that part of the country have been so often quoted, states that "the earliest period of the year that I noticed the appearance of *Swallows* was on the 12th of July 1803, when I saw two; but I remarked several towards the end of the same month in the following year (1804). The latest period I observed them was on the 30th of May 1806, when a number of them were twittering and flying high in the air. When I missed them at Paramatta, I have sometimes met with them among the north rocks, a romantic spot about two miles to the northward of the former place." A few stragglers remain in New South Wales during the whole of the winter, but their numbers cannot be for a moment compared with those to be observed in the summer, and which during the colder months have wended their way to a warmer and more congenial climate, where insect life is sufficiently abundant for the support of so great a multitude. I have never been able to trace this bird very far to the north; it certainly does not visit Java, nor I believe New Guinea, neither have I yet seen it from Port Essington or any part of the north coast, although it is probable that its range does extend thus far.

The natural breeding-places of this bird are the deep clefts of rocks and dark caverns, but since the colonization of Australia it has in a remarkable degree imitated its European prototype, by selecting for the site of its nest, the smoky chimneys, the chambers of mills and out-houses, or the corner of a shady verandah; the nest is also similarly constructed, being open at the top, formed of mud or clay, intermingled with grass or straw to bind it firmly together, and lined first with a layer of fine grasses and then with feathers. The shape of the nest depends upon the situation in which it is built, but it generally assumes a rounded form in front. The eggs are usually four in number, of a lengthened form; the ground colour pinky white, with numerous fine spots of purplish brown, the interspaces with specks of light greyish brown, assuming in some instances the form of a zone at the larger end; they are from eight to nine lines long by six lines broad. At Swan River the breeding-season is in September and October.

The food consists of small flies and other insects.

Forehead, chin, throat and chest rust-red; head, back of the neck, back, scapularies, wing-coverts, rump and upper tail-coverts deep steel-blue; wings and tail blackish brown, all but the two centre feathers of the latter with an oblique mark of white on the inner web; under surface very pale brown; under tail-coverts pale brown passing into an irregular crescent-shaped mark near the extremity and tipped with white; irides dark brown; bill and legs black.

The figures are those of a male and female of the natural size.



COLLOCALIA ARBOREA.

Tree Martin.

Dun-rumped Swallow, Lath. Gen. Hist., vol. vii. p. 309.

Hirundo pyrrhonota, Lath. MSS.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 190.

Hirundo nigricans, Vieill. Ency. Méth., Part II. p. 525?

Gáb-by-kál-lan-goó-rong, Aborigines of the lowlands of Western Australia.

Martin of the Colonists.

THE specific term of *pyrrhonota* having been given to a bird of this group by Vieillot, prior to the publication of the List of Australian Birds by Messrs. Vigors and Horsfield in the Linnean Transactions, as quoted above, I have been necessitated to furnish this species with a new appellation, and have selected that of *arborea* as indicative of its habits; for in every part of Australia that I have visited, it invariably selects the holes of trees for the purpose of nidification.

It is strictly a summer visitant to Van Diemen's Land and all the southern portions of Australia, arriving in August and retiring northwards as autumn approaches.

The Tree Martin is a familiar species, frequenting the streets of the towns in company with the Swallow. I observed it to be particularly numerous in the streets of Hobart Town, where it arrives early in September; the more southern and colder situation of the island rendering all migratory birds later in their arrival there.

It breeds during the month of October in the holes of trees, making no nest, but laying its eggs on the soft dust generally found in such places: the eggs are from three to five in number, of a pinky white faintly freckled at the larger end with fine spots of light reddish brown; they are eight lines long by six lines broad.

Its food consists of insects of various kinds, particularly a species of small black fly.

Considerable difference exists both in size and in the depth of colouring of specimens killed in New South Wales, Swan River and Van Diemen's Land; but as there exists no distinctive character of marking, I am induced to regard them as mere local varieties rather than as distinct species. The Van Diemen's race are larger in all their admeasurements, and have the fulvous tint of the under surface and the band across the forehead much deeper than in those killed in New South Wales; individuals from the latter locality again exceed in size those from Western Australia.

Specimens from Van Diemen's Land have the forehead crossed by a fulvous band; head, back of the neck, back and scapularies glossy bluish black; wings and tail brown; rump and upper tail-coverts light fulvous; throat, sides of the neck and flanks light fulvous, with a narrow stripe of dark brown in the centre of each feather; centre of the abdomen nearly white; irides, bill and feet blackish brown.

The figures in the opposite Plate, which are of the natural size, were taken from two of the varieties mentioned above; the upper one from a specimen killed in New South Wales, the other two from birds taken in Van Diemen's Land.



CHELIDON ARIEL: Gould.

J. Gould and H. Richter del.

C. B. Smith sculp.

COLLOCALIA ARIEL, *Gould.*

Fairy Martin.

Collocalia Ariel, Gould in Proc. of Zool. Soc., October 11, 1842.

UNTIL my arrival in the colony of New South Wales I had no idea of the existence of this new and beautiful Martin, nor in fact until I was awakened by its twittering notes at the bed-room window of the inn at Maitland, did I discover that I was surrounded by hundreds of this species, which were breeding under the verandahs and corners of the windows, precisely after the manner of the Common Martin of Europe. Several of their bottle-shaped nests were built round the house, and from these I obtained as many eggs as I desired.

It is numerously dispersed over all the southern portions of Australia, and like every other member of the genus it is strictly migratory, making the southern latitudes its summer residence. It usually arrives in the month of August and departs again in February or March; during this interval it rears two or three broods. The Fairy Martin, unlike the favourite Swallow of the Australians, although enjoying a most extensive range, appears to have an antipathy to the country near the sea, for neither in New South Wales nor at Swan River have I ever heard of its approaching the coast-line nearer than twenty miles; hence while I never observed it at Sydney, the town of Maitland on the Hunter is annually visited by it in great numbers. In Western Australia it is common between Northam and York, while the towns of Perth and Fremantle on the coast, are, like Sydney, unfavoured with its presence. I observed it throughout the district of the Upper Hunter, as well as in every part of the interior, breeding in various localities, wherever suitable situations presented themselves, sometimes in the holes of low decayed trees; while not unfrequently clusters of nests were attached to the perpendicular banks of rivers, the sides of rocks, &c., always, however, in the vicinity of water. The nest, which is bottle-shaped with a long neck, is composed of mud or clay, and like that of our Common Martin, is only constructed in the morning and evening, unless the day be wet or lowery. In the construction of the nests they appear to work in small companies, six or seven assisting in the formation of each nest, one remaining within and receiving the mud brought by the others in their mouths: in shape they are nearly round, but vary in size from four to six or seven inches in diameter; the spouts being eight, nine or ten inches in length. When built on the sides of rocks or in the hollows of trees they are placed without any regular order, in clusters of thirty or forty together, some with their spouts inclining downwards, others at right angles, &c.; they are lined with feathers and fine grasses. The eggs, which are four or five in number, are sometimes white, at others spotted and blotched with red; eleven-sixteenths of an inch long by half an inch broad.

Its flight closely resembles that of the Common Martin; the stomach is tolerably muscular and the food consists of small flies.

The sexes cannot be distinguished by their outward appearance.

Crown of the head rust-red; back, scapularies and wing-coverts deep steel-blue; wings and tail dark brown; rump buffy white; upper tail-coverts brown; under surface white, tinged with rust-red, particularly on the sides of the neck and flanks; the feathers of the throat with a fine line of dark brown down the centre; irides blackish brown; bill blackish grey; legs and feet olive-grey.

The figures are of the natural size.



MEROPS ORNATUS: Lath.

MEROPS ORNATUS, *Lath.*

Australian Bee-eater.

Merops ornatus, Lath. Ind. Orn., Supp. p. xxxv.

Mountain Bee-eater, Lewin, Birds of New Holl., pl. 18.

Variegated Bee-eater, Lath. Gen. Syn., Supp., vol. ii. p. 155, pl. 128.—Ib. Gen. Hist., vol. iv. p. 130, pl. lxix.—Shaw, Gen. Zool., vol. viii. p. 158.

Merops melanurus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 208.—Less. Traité d'Orn., p. 238.

Dee-weed-gang, Aborigines of New South Wales.

Bée-roo-bée-roo-long, Aborigines of the lowland, and

Be'-rin-be'-rin, Aborigines of the mountain districts of Western Australia.

Bee-eater of the Colonists.

THERE can, I think, be little doubt of the present being the only species of Bee eater inhabiting Australia, since no other came under my notice during my expedition; nor have I seen examples differing from those here figured in any of the numerous collections I have had opportunities of examining, consequently the specific term of *ornatus* long since applied to it by Dr. Latham must be the one adopted, that of *melanurus* given by Messrs. Vigors and Horsfield sinking into a synonym.

This bird has so many attractions that it will doubtless be always regarded as a general favourite with the Australians; the extreme beauty of its plumage, the elegance of its form and the graceful manner of its flight all combining to render it especially worthy of their notice; besides which, many pleasing associations are connected with it, for, like the Swallow and the Cuckoo of Europe, its arrival is a certain harbinger of the return of spring, which in the southern hemisphere is, as is well known, at the opposite period of the year to that of the northern; hence the Australian Bee-eater, which is strictly migratory, arrives in New South Wales and all parts of the same latitude in August, and departs northwards in March, the intervening period being employed in the duties of incubation and of rearing its progeny. During the summer months it is universally spread over the whole southern portion of the continent from east to west; and it will be interesting to ornithologists generally, as it was to myself, to know that at Port Essington on the northern coast it is also strictly migratory, being abundantly dispersed over that part of the country when it is absent from the southern. “On my arrival at Port Essington in July,” says Mr. Gilbert, “this bird was extremely abundant in every variety of situation. It is a migratory bird in this part of Australia; a few pairs perhaps remaining to breed, as is evident from the natives being well acquainted with their mode of incubating, and also from my having in one instance seen a pair of old birds with their young, which could not long have left the nest as they were still being fed by their parents. With the exception of these I did not observe this species in any part of the Peninsula or the adjacent islands, from the latter part of August to the time of my leaving in the following March.”

I have never seen this bird either in collections from New Guinea or from any other of the Indian islands; hence we may naturally conclude that the extreme northern parts of Australia form the boundary of its range in that direction, as New South Wales and the same degree of latitude do on the southern. In South Australia and at Swan River it is equally numerous as in New South Wales, generally giving preference to the inland districts rather than to those near the coast; hence it is rarely to be met with in the neighbourhood of Perth, while in the York district it is very common. In New South Wales I found it especially abundant on the Upper Hunter, and all other parts towards the interior, as far as I had an opportunity of exploring. Its favourite resorts during the day are the open, arid and thinly timbered forests; and in the evening the banks and sides of rivers, where numbers may frequently be seen in company. It almost invariably selects a dead or leafless branch whereon to perch, and from which it darts forth to capture the passing insect, much after the manner of many other of the Fissirostral birds, particularly the Kingfishers, to which it also assimilates in the upright position it assumes while perched. Its flight somewhat resembles that of the *Artami*, and although it is capable of being sustained for some time, the bird more frequently performs short excursions, and returns to the branch it had left.

I have had frequent opportunities of observing both the eggs and young, which are deposited and reared in holes, made in the sandy banks of rivers or any similar situation in the forest favourable for the purpose. The entrance is about the size of a mouse-hole, and is continued for a yard in depth, at the end of which is an excavation of sufficient size for the reception of the parent, and the deposition on the bare sand of four or five beautiful white eggs, which are ten lines long by eight or nine lines broad.

The stomach is tolerably muscular, and the food consists of various insects, principally coleoptera and neuroptera.

The sexes are alike in plumage, and may be thus described:—

Forehead, line over the eye, back and wing-coverts brownish-green; crown of the head and nape orange-brown; wings orange-brown, passing into green on the extremities of the primaries, and broadly tipped with black; two or three of the scapularies, lower part of the back, rump and upper tail-coverts cœrulean blue; tail black, most of the feathers, particularly the two centre ones, slightly margined with blue; lores, line beneath and behind the eye and ear-coverts velvety-black; beneath which is a stripe of cœrulean blue; throat rich yellow, passing into orange on the sides of the neck; beneath this a broad band of deep black; under surface like the back, becoming green on the lower part of the abdomen; under tail-coverts light blue; irides light brownish-red; bill black; legs and feet mealy greenish-grey.

The young are destitute of the black on the throat, and of the blue line beneath the eye.

The figures are of the natural size.



EURYSTOMUS AUSTRALIS: Swains

J. Gould and H.C. Richter del et lith.

C. Hullmandel Imp.

EURYSTOMUS AUSTRALIS, Swains.

Australian Roller.

Eurystomus orientalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 202.

Eurystomus Australis, Swains. Anim. in Menag., p. 326.—Ib. Class. of Birds, vol. ii. p. 333.

Coracias pacifica, Lath. Ind. Orn. Supp., p. xxvii?

Pacific Roller, Lath. Gen. Syn. Supp., vol. ii. p. 371?

Natay-kin, Aborigines of New South Wales.

Dollar Bird of the Colonists.

By the older writers this species was considered to be identical with the *Eurystomus orientalis*, and the merit of first pointing out its distinguishing characters is due to Mr. Swainson, who observes that it is "smaller than *E. orientalis*; has the bill less compressed, and therefore much broader; the colours lighter, but the wings much bluer; the spurious wings entirely vivid blue, as well as the outer webs of the quills; while in *orientalis* these parts are almost black."

It is a very local species, as I have never seen it from or met with it in any other part of Australia excepting in New South Wales, and even there it is migratory, arriving early in the spring; having brought forth its progeny, it retires northwards on the approach of winter. From what I saw of it,—and I had opportunities of observing it almost daily for some length of time,—it seemed to be most active about sun-rise and sun-set, and during cloudy days; in sultry weather it was generally perched upon some dead branch in a state of quietude. It is a very bold bird at all times, but particularly so during the breeding season, when it comes down with the utmost fury upon any intruder that may venture to approach the hole in the tree in which its eggs are deposited.

When engaged in the capture of insects it usually perches upon the dead upright branch of a tree growing beside and overhanging water, where it sits very erect, soaring all around until a passing insect attracts its notice, when it suddenly darts off, secures its victim, and returns to the same branch; at other times it may constantly be seen on the wing, mostly in pairs, flying just above the tops of the trees, diving and rising again with rapid turns in the most beautiful manner. During flight, which, when performed at a considerable elevation, is heavy and laboured, the white spot in the centre of each wing, then widely expanded, shows very distinctly, and hence the name of Dollar Bird bestowed upon it by the colonists.

It is a very noisy bird, particularly in dull weather, when it often emits its peculiar chattering note during flight.

It is said to take the young Parrots from their holes and kill them, but this I never witnessed; the stomachs of the many I dissected contained nothing but the remains of coleoptera.

The breeding-season lasts from September to December; and the eggs, which are three and sometimes four in number, are deposited in the hole of a tree without any nest; they are of a beautiful pearly white, considerably pointed at the smaller end; their medium length is one inch and five lines, and breadth one inch and two lines.

The sexes are alike in plumage.

Head and neck dark brown, passing into the sea-green of the upper surface, and deepening into black on the lores; spurious wing, outer webs of the basal half of the quills, outer webs of the secondaries and the basal half of the outer webs of the tail-feathers vivid blue; six of the primaries with a greenish white basal band; extremities of the primaries black; tail green at the base, black at the tip; throat vivid blue, with a stripe of lighter blue down the centre of each feather; under surface of the shoulder and abdomen light green; under surface of the inner webs of the primaries, and of all but the two centre tail-feathers deep blue, the former interrupted by the greenish white band; irides dark brown; eyelash, bill and feet red; inside of the mouth yellow.

The figures are of the natural size.



DACELO GIGANTEA: *Leach.*

DACELO GIGANTEA, *Leach*.

Great Brown Kingfisher.

Alcedo gigantea, Lath. Ind. Orn., vol. i. p. 245.

——— *fusca*, Gmel. edit. of Linn. Syst. Nat., vol. i. p. 454.

Grand Martin-pêcheur de la Nouvelle Guinée, Son. Voy., p. 171. pl. 106.—Buff. Hist. des Ois., tom. vii. p. 181.—Pl. Enl. 663. ?

Martin Chasseur, Temm. Man. d'Orn., 2nd edit. p. lxxxviii.

Giant Kingfisher, Shaw, Gen. Zool., vol. viii. p. 53.

Great Brown Kingfisher, Lath. Gen. Syn., vol. ii. p. 609.—Ibid. Supp., vol. ii. p. 143.—White's Journ., pl. in p. 137.—Phill. Voy., pl. in p. 287.—Lath. Gen. Hist., vol. iv. p. 9.

Dacelo gigantea, Leach, Zool. Misc., vol. ii. p. 126. pl. cvi.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 204.—Swains. Class. of Birds, vol. ii. p. 335.

Choucalcyon australe, Less. Traité d'Orn., p. 248.

Paralcyon gigas, Gloger.

Alcedo gigas, Bodd.

Dacelo gigas, G. R. Gray, Gen. of Birds, 2nd edit. p. 14.

Gogo-bera, Aborigines of New South Wales.

Laughing Jackass of the Colonists.

THE *Dacelo gigantea* is a bird with which every resident and traveller in New South Wales is more or less familiar, for independently of its large size, which in itself would tend to attract attention, its voice is so extraordinary as to be unlike that of any other living creature. In its disposition it is by no means shy, and when any new objects are presented to its notice, such as a party traversing the bush or pitching their tent in the vicinity of its retreat, it becomes very prying and inquisitive, often perching on the dead branch of some neighbouring tree, and watching with the greatest curiosity the kindling of the fire and the preparation of the meal; its presence, however, owing to the quietude with which it passes through the forest, and the almost noiseless manner in which it settles, is seldom detected until it emits its extraordinary gurgling, laughing note, which generally calls forth some exclamation according with the temper of the hearer, such as "There is our old friend the Laughing Jackass," or an epithet of a less friendly character: not unfrequently does its life pay the penalty of its temerity; for if, as is often the case, the traveller's larder be ill-provided and his appetite keen, but a few minutes elapse before it is roasting over the fire it was lately surveying with so much curiosity. So remarkable are the sounds emitted by the bird that they have been noted by nearly every writer on New South Wales and its productions. Mr. Caley states that its "loud noise, somewhat like laughing, may be heard at a considerable distance, from which circumstance, and its uncouth appearance, it probably received the extraordinary appellation given to it by the settlers on their first arrival in the colony." Captain Sturt says, "Its cry, which resembles a chorus of wild spirits, is apt to startle the traveller who may be in jeopardy, as if laughing and mocking at his misfortune;" and Mr. Bennett, in his 'Wanderings,' says, "Its peculiar gurgling laugh, commencing in a low and gradually rising to a high and loud tone, is often heard in all parts of the colony; the deafening noise being poured forth while the bird remains perched upon a neighbouring tree; it rises with the dawn, when the woods re-echo with its gurgling laugh; at sunset it is again heard; and as that glorious orb sinks in the west, a last 'good night' is given in its peculiar tones to all within hearing."

The Great Brown Kingfisher does not inhabit Van Diemen's Land, nor has it yet been met with in Western Australia; it may be said to be almost solely confined to that portion of Australia lying between Spencer's Gulf and Moreton Bay, the south-eastern corner, as it were, of the continent. The plate in the Pl. Enl., quoted above, has been considered by all previous writers to have reference to this bird, and while I coincide in this opinion, I think that some mistake must have arisen as to the locality, and that it never visits New Guinea nor even the northern coast of Australia, where its place is supplied by the *Dacelo cervina* and *D. Leachii*. Unlike most other species, it frequents every variety of situation; the luxuriant brushes stretching along the coast, the more thinly-timbered forest, the belts of trees studding the parched plains and the brushes of the higher ranges being alike favoured with its presence; over all these localities it is rather thinly dispersed being nowhere very numerous.

I believe that this bird seldom, if ever, drinks; consequently the most arid plains are as suitable to its habits as the shrouded river sides and the flat brushes near the coast.

Its food, which is of a mixed character, consists exclusively of animal substances; reptiles, insects and crabs, however, appear to be its favourite diet, upon which it is destined by nature to subsist: it devours lizards with avidity, and it is not an unfrequent sight to see it bearing off a snake in its bill to be eaten at leisure; it also preys on small mammalia. I recollect shooting a Great Brown Kingfisher in South Australia in order to secure a fine rat I saw hanging from its bill, and which proved to be a rare species inhabiting the plains of that part of the country. It breeds during the months of August and

September, and generally selects a hole in a large gum-tree for the purpose ; making no nest, but depositing its beautiful pearl-white eggs, which are one inch and nine lines long by one inch and five lines broad, on the decomposed wood at the bottom of the hole. When there are young ones in it, it defends its breeding-place with great courage and daring, darting down upon any intruder who may attempt to ascend the tree, and inflicting severe and dangerous blows with its pointed bill.

The sexes present so little difference in the colouring of their plumage, that they are scarcely distinguishable from each other ; neither do the young at a month old exhibit any great variation from the adult, the only difference being that the markings are somewhat darker and the brown more generally diffused.

It bears confinement remarkably well, and is one of the most amusing birds for the aviary with which I am acquainted : examples have been brought alive to England ; one lived for several years in the Gardens of the Zoological Society of London, and at the moment I am writing (April 1843) a fine individual brought from New South Wales by Mr. Yaldwyn, is now living at his seat at Blackdown in Sussex, where it attracts the attention of every one by its singular actions and extraordinary notes, which are poured forth as freely as in its native wilds.

Forehead brown, each feather with a stripe of blackish brown down the centre ; crown of the head, lores, ear-coverts, and a broad band passing round the occiput blackish brown ; space between the crown of the head and the band encircling the occiput, and the back of the neck buff, crossed by fine irregular lines of dark brown ; back and wings brownish black ; the wing-coverts and rump tipped with verditer green ; primaries white at the base, black for the remainder of their length, and stained with green on their outer margins immediately behind the white ; upper tail-coverts blackish brown, crossed by several broad irregular bands of rusty red ; tail brownish black, tipped with white, the white increasing in extent as the feathers recede from the centre ; the central feathers crossed near the tip with rusty red ; the lateral feathers with brownish black, the bands being very narrow near the tip, and gradually increasing in breadth as they approach the base, where the white interspaces also become tinged with rusty red ; under surface pale buffy white, crossed by fine irregular freckled markings of dark brown ; upper mandible brownish black ; under mandible pale buff ; feet olive ; irides dark brown ; eyelash olive-brown.

The figures represent a male and two young of the natural size.



DACELO LEACHII: Vig. & Horsf.

J. Gould and H.C. Richter del. et lith.

Millmandel & Walton. Imp.

DACELO LEACHII, *Vig. and Horsf.*

Leach's Kingsfisher.

Dacelo Leachii, Lath. MSS. Vig. and Horsf. in Linn. Trans., vol. xv. p. 205.

SPECIMENS of this fine Kingsfisher are contained in the British Museum, the Linnean Society, and my own collections, all of which were procured on the north-east coast of Australia, where it evidently replaces the *Dacelo gigantea* of New South Wales and South Australia.

The specimen in the Linnean Society's museum was presented by Dr. Brown, who procured it in Keppe Bay on the east coast; and it was subsequently seen at Shoalwater Bay and Broad Sound on the same coast; my own specimens were obtained at Cape York, the north-eastern extremity of Australia.

The habits, actions, food, and indeed the whole of the economy, are so precisely like those of the *Dacelo gigantea* that a separate description of them is entirely unnecessary.

The male has the head and back of the neck striated with brown and white; sides of the neck and under surface white, crossed with very narrow irregular markings of brown, these markings becoming much broader and conspicuous on the under surface of the shoulder; back brownish black; wing-coverts and rump shining azure-blue; wings deep blue; primaries white at the base, black on their inner webs and blue on the outer; tail rich deep blue, all but the two centre feathers irregularly barred near the extremity and largely tipped with white; upper mandible brownish black, under mandible pale buff; irides dark brown; feet olive.

The female differs but little from the male in the colouring of the plumage, except that the tail-feathers, instead of being of a rich blue barred and tipped with white, are of a light chestnut-brown conspicuously barred with bluish black.

The Plate represents the two sexes about the natural size.





DACELO CERVINA: Gould.

DACELO CERVINA, *Gould.*

Fawn-breasted Kingfisher.

Dacelo cervina, Gould, Birds of Australia, Part II. cancelled.

Lă-rool, Aborigines of Port Essington.

THE northern and north-western portions of Australia constitute the true habitat of this species; it was observed in tolerable abundance by Captain Grey during his expedition to the latter part of the country, and specimens of it have also formed a part of every collection of any extent made at Port Essington. In disposition it appears to be more shy and wary than the *Dacelo gigantea* of New South Wales, of which it is a representative. Mr. Gilbert, whose observations were made on the Cobourg Peninsula, states that it "inhabits well-wooded forests, generally in pairs, is extremely shy and very difficult to procure; it is very fond of perching on the topmost dead branch of a tree, where it has an uninterrupted view of every thing passing around, and pours out its loud discordant tones. Sometimes three or four pairs may be heard at one time, when the noise is so great that no other sound can be heard.

"The natives tell me that it breeds in the honey-season, which is during the months of May, June and July."

The food of this Kingfisher is doubtless similar to that of the *Dacelo gigantea*. The stomachs of those examined by Mr. Gilbert were tolerably muscular, and contained the remains of coleopterous and other kinds of insects.

When fully adult the male differs from his mate in having the tail-feathers of a deep and splendid blue instead of brown; a feature which will be readily perceived on reference to the accompanying Plate.

The male has the feathers of the head buffy white, with a central stripe of dark brown, the latter colour becoming most conspicuous on the occiput; throat white; cheeks, ear-coverts, back of the neck, chest and all the under surface sienna-yellow, crossed on the flanks with very minute irregular zigzag bands of brown; primaries black at the tip, white at the base; the base of their external webs, the secondaries and spurious wing rich china blue; greater and lesser wing-coverts, lower part of the back and upper tail-coverts shining light blue; tail and the longest of the upper tail-coverts rich deep blue, the former broadly tipped with white; irides greenish white; upper mandible blackish brown, the cutting edges greenish white; lower mandible greenish white, the base dark brown on the sides, and blue on the under surface; tarsi and feet emerald green; claws black.

The female has the feathers of the head, cheeks, and ear-coverts buffy white, with a central stripe of dark brown; throat white; back of the neck, chest and all the under surface sienna-yellow; the chest, flanks and abdomen crossed by fine zigzag lines of brown; upper part of the back and scapularies umber-brown; primaries blackish brown at the tip and white at the base; the basal portion of their external webs, the secondaries spurious and the wing rich china blue; greater and lesser wing-coverts and upper tail-coverts light shining blue; tail and the longest of the upper coverts rich chestnut brown, which passes into buff at the tip, the whole transversely marked with eight or nine bands of rich blue black.

The figures are those of the two sexes of the natural size.



HALCYON SANCTUS: Vig. & Horsf.

HALCYON SANCTUS, *Vig. and Horsf.*

Sacred Halcyon.

Sacred Kingsfisher, Phill. Bot. Bay, pl. in p. 156.—White's Voy., pl. in p. 193.

Halcyon Sanctus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 206.—Gould, Syn. of Birds of Aust., Part III.

Halcyon sacra, Jard. and Selb. Ill. Orn., vol. ii. pls. 96 and 97.

Dacelo chlorocephala, var. β . Less. Traité Orn., p. 246.

Kingsfisher of the Colonists.

Kūn-yēē-nūk of the Aborigines, Western Australia.

ON reference to the synonyms given above, it will be seen that a difference of opinion is entertained from the authors of the "Illustrations in Ornithology" respecting this species being identical with the *Halcyon collaris* of Mr. Swainson, a bird which I have not yet seen from Australia, although it may possibly be found in the northern part of that continent, since it is common in Java; and I find that Mr. Swainson, in his recently published "Classification of Birds," has arranged them as distinct.

The Sacred Halcyon does not inhabit Van Diemen's Land, but is very generally dispersed over the Australian continent. I have specimens from nearly every locality: those from Port Essington on the north are precisely identical with those of the south coast; on the other hand, those inhabiting Western Australia are a trifle larger in all their measurements, but otherwise present no differences of sufficient importance to warrant their being considered as distinct.

It is a summer resident in New South Wales and throughout the southern portion of the continent, retiring northwards after the breeding-season. It begins to disappear in December, and by the end of January few are to be seen: solitary individuals may, however, be met with even in the depth of winter. They return again in spring, commencing in August, and by the middle of September are plentifully dispersed over all parts of the country, inhabiting alike the most thickly wooded brushes, the mangrove-forests which border, in many parts, the armlets of the sea, and the more open and thinly timbered plains of the interior, often in the most dry and arid situations far distant from water; and it would appear that, as is the case with many of the insectivorous birds of Australia, a supply of that element is not essential to its existence, since, from the localities it is often found breeding in, it must necessarily pass long periods without being able to obtain it.

The brilliant and metallic lustre of its plumage renders it a conspicuous object in the bush: its loud piercing call, also, often betrays its presence, particularly during the season of incubation, when the bird becomes more and more clamorous as the tree in which its eggs are deposited is approached by the intruder. The note most frequently uttered is a loud *pee-pee*, continued at times to a great length, resembling a cry of distress. It sits very upright, generally perching on a small dead branch for hours together, merely flying down to capture its prey, and in most instances returning again to the site it has just left. Its food is of a very mixed character, and varies with the nature of the localities it inhabits. It greedily devours the mantis, grasshoppers and caterpillars, not refusing lizards and very small snakes, all of which are swallowed whole, the latter being killed by beating their heads against a stone or other hard substance, after the manner of the Common Kingsfisher. Specimens killed in the neighbourhood of salt-marshes had their stomachs literally crammed with crabs and other crustaceous animals; while engaged in the capture of which it may be observed sitting silently on the low mangrove-bushes skirting the pools which every receding tide leaves either dry or with a surface of wet mud, upon which crabs are to be found in abundance. I have never seen it plunge into the water after fish like the true Kingsfishers, and I believe it never resorts to that mode of obtaining its prey. On the banks of the Hunter its most favourite food is the larvæ of a species of ant, which it procures by excavating holes in the nests of this insect which are constructed around the boles and dead branches of the *Eucalypti*, and which resemble excrescences of the tree itself.

The season of nidification commences in October and lasts till December, the hollow spouts of the gum and boles of the apple trees being generally selected as a receptacle for the eggs, which are four or five in number, perfectly white, one inch and a line in length, and ten lines in diameter.

The sexes present no difference either in their size or colouring, and the young are only distinguished by being of a less brilliant hue, and by the wing-coverts and feathers of the breast being edged with brown.

Crown of the head, back, and scapularies dull green; wings and tail green, slightly tinged with blue; ear-coverts, and an obscure circle bounding the green of the head, greenish-black; rump verditer green; throat white; line from the nostrils over the eye, nuchal band, and all the under surface buff, becoming deeper on the flanks; bill black, the basal portion of the under mandible flesh-white; feet flesh-red, tinged with brown; irides dark brown.

The Plate represents an old and a young bird of the natural size.



HALCYON PYRRHOPYGIA: Gould.

J & E. Gould del.

C. Hullmandel imp.

HALCYON PYRRHOPYGIA, *Gould.*

Red-backed Halcyon.

Halcyon pyrrhopygia, Gould in Proc. of Zool. Soc., September 8, 1840.

THIS new Halcyon is an inhabitant of the interior, but over what extent of country it may range is not yet known. The only parts where I observed it was the myall-brushes (*Acacia pendula*) of the Lower Namoi, particularly those growing on the edge of the large plain skirting the Nundawar range of Major Sir Thomas Mitchell. It was usually seen sitting very upright on the dead branches of the myall- and gum-trees, sometimes on those growing out on the hot plains, at others on those close by the river-side. I succeeded in obtaining both old and young birds, which, judging from the size of the latter, I should suppose had left their breeding-place about a month before I arrived in the neighbourhood of the Namoi, in December. I also saw in this district the common or Sacred Halcyon, but in far less abundance than between the ranges and the coast. This latter species may be hereafter found to be more exclusively an inhabitant of the country bordering the sea, while the Red-backed Halcyon may be exclusively a denizen of the distant interior. The unusual colouring of the back at once distinguishes it from all the other members of the genus inhabiting Australia, but in its general economy and mode of living it presents no observable difference.

Whether it remains during the whole of the year, or is a migratory bird like the common species, I was not able to learn; for although Mr. Charles Coxen had previously informed me of the existence of such a Halcyon on the Namoi, he could give me no further account of it.

Crown of the head dull green, intermingled with white, giving it a striated appearance: a broad black stripe commences at the base of the bill, passes through the eye, and encircles the back of the head; upper part of the back and scapularies green; remainder of the wings bluish green; lower part of the back, rump, and upper tail-coverts red; tail green, tinged with blue; throat, a broad collar encircling the back of the neck, and all the under surface white; bill black, the base of the lower mandible flesh-white; irides blackish brown; feet dark olive brown.

The figure is of the natural size.



HALCYON SORDIDUS, *Gould.*

Sordid Halcyon.

Halcyon sordidus, Gould in Proc. of Zool. Soc., Part X. p. 72.

I possess two specimens of this species of *Halcyon*, which were killed by Mr. Bynoe on the north coast of Australia; unfortunately they were unaccompanied by any information respecting their habits and economy; they appear to be fully adult, and equal in size the *Halcyon collaris*,—a species, which, although said to be Australian, I have no authentic evidence of its ever having been killed therein.

Head, back, scapularies and wing-coverts brownish oil-green; wings greenish blue, gradually changing into green on the tips of the tertiaries; collar round the back of the neck and all the under surface buffy white; tail greenish blue; upper mandible and tip of the lower one black; base of the latter flesh-white.

The figures are of the natural size.



HALCYON MACLEAYII, *Jard. and Selb.*

MacLeay's Halcyon.

Halcyon MacLeayii, Jard. and Selb. Ill. Orn., vol. iii. pl. 101.

Halcyon incinctus, Gould in Proc. of Zool. Soc., Part V. p. 142, female.

Bush Kingfisher, Residents at Port Essington.

THERE certainly has not yet been discovered a more beautiful Halcyon in any part of the world than the one figured in the accompanying Plate, which has been dedicated to Mr. Alexander MacLeay by the authors of the "Illustrations of Ornithology" as a tribute of respect, in the propriety of which I entirely concur.

The extreme brilliancy of the plumage of this bird would seem to indicate that it is an inhabitant of a hotter climate than that of New South Wales, and the correctness of this inference is borne out by the fact that the *Halcyon MacLeayii* has only yet been found on the extreme northern portion of the continent; it is tolerably abundant at Port Essington, and it is also spread over every part of the Cobourg Peninsula suited to its peculiar habits; like the other members of the genus to which it belongs, it is rarely if ever seen near water, and evinces so decided a preference for the open forests of the interior of the country that it has obtained the name of "Bush Kingfisher" from the residents at Port Essington; it is generally dispersed about in pairs, and feeds on small reptiles, insects and their larvæ; its general note is a loud *pee-pee* uttered with considerable rapidity. It incubates in November and December, sometimes forming its nest in the hollow trunks of trees, and at others excavating a hole for itself in the nest of the tree-ants, which presents so prominent and singular a feature in the scenery of the country: the nest of the *H. Macleayii* is easily discovered, for on the approach of an intruder the birds immediately commence flying about in a very wild manner, uttering at the same time a loud piercing cry of alarm; the eggs are three or four in number, of a pearly white and nearly round in form, being eleven lines long by ten broad.

So much difference exists in the plumage of the sexes that Mr. Gilbert states he was for some time induced to regard them as specifically distinct; an error into which I had myself previously fallen when describing the female as a new species in the "Proceedings of the Zoological Society" as quoted above; "but upon closer observation," adds Mr. Gilbert, "I soon satisfied myself that the difference of plumage was merely sexual, the dissection of a large number of specimens fully proving that those with a ring round the neck are males and those without it females."

The male has a line under the eye and ear-coverts deep glossy black; head, occiput, wings and tail rich deep prussian blue; primaries and secondaries white at the base, forming a conspicuous spot when the wings are spread; for the remainder of their length these feathers are black, margined externally with light prussian blue; immediately before the eye an oval spot of white; collar surrounding the back of the neck and all the under surface white, tinged with buff on the lower part of the flanks; back and upper tail-coverts verditer blue; scapularies verditer green, both these colours bounded near the white collar with prussian blue; under surface of the wing white, the tips of the coverts black; under surface of the tail black; bill black, the basal portion of the under mandible yellowish white; tarsi black; inner side of the feet and back of the tarsi ash-grey; irides very dark brown.

The general colours of the female are similar to those of the male, but she differs from her mate in being entirely destitute of the white collar at the back of the neck, which part is deep prussian blue, thus uniting the blue of the occiput and of the back; in the tints being much less brilliant in the back, being of a dull brownish verditer green, and in the upper tail-coverts pale verditer green instead of blue; upper mandible black; lower mandible half-way from the tip and along the whole of the cutting edges black, the remainder being fleshy white tinged with blue where it joins the black; legs and feet greenish grey.

The young male resembles the female in colour, but is still less brilliant; has the back of a purer green; the under surface tinged with buff; the spot on the lores deep buff; and the collar at the back of a deep buff, interrupted by some of the feathers of the occiput.

The figures are those of a male and a female of the natural size.



ALCEDONE AZURRA.

ALCYONE AZUREA.

Azure Kingsfisher.

Alcedo azurea, Lath. Ind. Orn. Supp., p. xxxii.—Lewin, Birds of New Holl., pl. 1.—Swains. Zool. Ill., pl. 26.

Alcedo tribrachys, Shaw, Nat. Misc., pl. 681.—Temm. Man. d'Orn., 2nd edit., p. lxxxviii.

Tri-digitated Kingsfisher, Shaw, Gen. Zool., vol. viii. p. 105.

Azure Kingsfisher, Lath. Gen. Syn. Supp., vol. ii. Add., p. 372.—Ib. Gen. Hist., vol. iv. p. 61.

Ceyx azurea, Jard. and Selb. Ill. Orn., vol. ii. pl. 55. fig. 1.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 208.

Alcyone Australis, Swains. Class. of Birds, vol. ii. p. 336.

Ceyx cyanea, Less. Traité d'Orn., p. 241.—Ib. Man. d'Orn., tom. ii. p. 96.

Alcyone azurea, G. R. Gray, List of Gen. of Birds, 2nd edit. p. 14.

WITH the exception of Swan River, every colony of Australia, from Port Essington on the north-west to Van Diemen's Land in the extreme south, is inhabited by Azure Kingsfishers ; but as they, although closely allied, constitute at least three species, the present page must necessarily treat exclusively of the one that inhabits New South Wales and South Australia, over the whole of which countries it is dispersed, wherever brooks, ponds and other waters occur suitable to its habits and mode of life. In size and in the brilliancy of its plumage, the Azure Kingsfisher is intermediate between the species inhabiting the north coast and that found in Van Diemen's Land ; although generically distinct from the Kingsfisher of Europe (*Alcedo Ispida*), it has many characters in common with that bird. It subsists almost exclusively on small fish and aquatic insects, which it captures in the water by darting down from some bare branch overhanging the stream, and to which it generally returns to kill and devour its prey, which is swallowed entire and head foremost, after the manner of the little favourite of our own island. It is a solitary bird, a pair, and frequently only one, being found at the same spot. During the breeding-season it becomes querulous and active, and even pugnacious if any intruder of the same species should venture within the precincts of its abode. The males at this season have great confidence, and chase each other up and down the stream with arrow-like quickness, the rich azure-blue of the back glittering in the sun, and appearing more like a meteor as it darts by the spectator than a bird. The task of incubation commences in August and terminates in January, during which period two broods are frequently brought forth. The eggs, which are of a beautiful pearly or pinkish white and rather round in form, are deposited at the extremity of a hole, in a perpendicular or shelving bank bordering the stream, without any nest being made for their reception ; they are from five to seven in number, three quarters of an inch broad by seven-eighths of an inch long. The young at the first moult assume the plumage of the adult, which is never afterwards changed. The hole occupied by the bird is frequently almost filled up with the bones of small fish, which are discharged from the throat and piled up round the young in the form of a nest. Immediately on leaving their holes the young follow the parents from one part of the brook to another, and are fed by them while resting on some stone or branch near the water's edge ; they soon, however, become able to obtain their own food, and may be observed at a very early age plunging into the water to a considerable depth to capture small fish and insects.

The sexes are precisely similar in the colouring of their plumage, neither do they differ in size. The young are very clamorous, frequently uttering their twittering cry as their parents pass and repass the branch on which they are sitting.

All the upper surface and a patch on each side of the chest fine ultramarine blue, becoming more vivid on the rump and upper tail-coverts ; on each side of the neck behind the ear-coverts a tuft of yellowish white feathers ; wings black ; throat white, slightly washed with buff ; all the under surface, including the under side of the wing, ferruginous orange, the flanks tinged with bluish lilac, giving them a rich purple hue ; line from the bill to the eye reddish orange ; irides and bill black ; feet orange.

The Plate represents the two sexes of the natural size.



ALCYONE PUSILLA.

J. Gould and H.C. Richter del et lith.

C. Hullmandel Imp.

ALCYONE PUSILLA.

Little Kingfisher.

Ceyx pusilla, Temm. Pl. Col., 595. fig. 3.

Nu-reā-bin-mo, Aborigines of the Cobourg Peninsula.

THIS lovely little Kingfisher is a native of the northern shores of Australia ; the specimens in my collection were all procured at Port Essington where it is a rare bird ; and from it always inhabiting the densest mangroves, is not only seldom seen, but is extremely difficult to procure ; in general habits and manners it very much resembles the *Alcyone azurea*, but its note is somewhat more shrill and piping, and its flight more unsteady. Specimens of this species from New Guinea, which I have had opportunities of examining in the noble collection at Leyden, present no difference whatever from those found in Australia.

The food of the *Alcyone pusilla* consists exclusively of fish, which are taken precisely after the manner of the Common Kingfisher of our own island.

The sexes are alike in size and colour.

Lores, a tuft behind the ear-coverts and under surface silky white ; forehead, sides of the neck, wing-coverts and the margins of the secondaries green ; primaries brownish black ; all the upper surface and a large patch on each side on the chest brilliant intense blue ; tail dull deep blue ; irides dark blackish brown ; bill black ; legs and feet greenish grey.

The figures are of the natural size.



ARTAMUS SORDIDUS.

ARTAMUS SORDIDUS.

Wood Swallow.

Turdus sordidus, Lath. Ind. Orn., Supp., p. xliii.

Sordid Thrush, Lath. Gen. Syn., Supp., vol. ii. p. 186.—Shaw, Gen. Zool., vol. x. p. 238.—Lath. Gen. Hist., vol. v. p. 131.

Ocypterus albovittatus, Cuv. Règn. Anim., tom. iv. t. 3. f. 6.—Valenc. Mém. du Mus. d'Hist. Nat., tom. vi. p. 23. t. 8. f. 2.—Gould, Syn. Birds of Australia, Part I. fig. 3.

Artamus lineatus, Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xvii. p. 297.—Ib. Ency. Méth., Part II. p. 758.

Artamus albovittatus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 210.

Leptopteryx albovittata, Wagl. Syst. Av., sp. 5.

Be-wó-wen, Aborigines of the lowland and mountain districts of Western Australia.

Worle, Aborigines of King George's Sound.

Wood Swallow of the colonists.

THIS Wood Swallow has been long known to ornithologists, but unfortunately under so many generic and specific appellations, that it may be cited as an instance of the manner in which our science has been burthened with useless names, thereby producing an inextricable confusion, and which in this instance, by a reference to Latham's accurate description, and the slightest care on the part of other writers, might have been avoided.

No other species of the Australian *Artami* with which I am acquainted possesses so wide a range from east to west as the present; the whole of the southern portion of the continent, as well as the island of Van Diemen's Land, being alike favoured with its presence. The extent of its range northward has not yet been satisfactorily ascertained, beyond the certainty that it has not hitherto been received in any collection from the north coast.

It may be regarded as strictly migratory in Van Diemen's Land, where it arrives in October, the beginning of the Australian summer, and after rearing at least two broods departs again northwards in November. On the continent a scattered few remain throughout the year in all the localities favourable to its habits, the number being regulated by the supply of insect food necessary for their subsistence. I may here observe, that specimens from Swan River, South Australia and New South Wales present no difference either in size or colouring, while those from Van Diemen's Land are invariably larger in all their admeasurements, and are also of a deeper colour; I regard them, however, as mere varieties of each other, the greater size of the latter being doubtless caused by the superabundance of food which this more southern and humid climate affords.

This Wood Swallow, besides being the commonest species of the genus, must I think be rendered a general favourite with the Australians, not only from its singular and pleasing actions, but by its often taking up its abode and incubating near the houses, particularly such as are surrounded by paddocks and open pasture-lands skirted by large trees. It was in such situations as these in Van Diemen's Land, at the commencement of spring, that I first had an opportunity of observing this species; it was then very numerous on all the cleared estates on the north side of the Derwent, about eight or ten being seen on a single tree, and half as many crowding one against another on the same dead branch, but never in such numbers as to deserve the appellation of flocks: each bird appeared to act independently of the other; each, as the desire for food prompted it, sallying forth from the branch to capture a passing insect, or to soar round the tree and return again to the same spot; on alighting it repeatedly throws up and closes one wing at a time, and spreads the tail obliquely prior to settling. At other times a few were seen perched on the fence surrounding the paddock, on which they frequently descended, like Starlings, in search of coleoptera and other insects. It is not, however, in this state of comparative quiescence that this graceful bird is seen to the greatest advantage, neither is it that kind of existence for which its form is especially adapted; for although its structure is more equally suited for terrestrial, arboreal and aerial habits than that of any other species I have examined, the form of its wing at once points out the air as its peculiar province: hence it is, that when engaged in pursuit of the insects which the serene and warm weather has enticed from their lurking-places among the foliage to sport in higher regions, this beautiful species in these aerial flights displays its greatest beauty, while soaring above, in a variety of easy positions, with white-tipped tail widely spread. Another very extraordinary and singular habit of the bird is that of clustering like bees on the dead branch of a tree, as represented in the Plate; this feature was not seen by me, but by my assistant Mr. Gilbert, during his residence at Swan River, and I have here given his account in his own words. "The greatest peculiarity in the habits of this bird is its manner of suspending itself in perfect clusters, like a swarm of bees; a few birds suspending themselves on the under side of a dead branch,

while others of the flock attach themselves one to the other, in such numbers that they have been observed nearly of the size of a bushel measure."

It was very numerous in the town of Perth until about the middle of April, when I missed it suddenly, nor did I observe it again until near the end of May, when I saw it in countless numbers flying in company with the Common Swallows and Martins over a lake about ten miles north of the town; so numerous, in fact, were they, that they darkened the water as they flew over it.

Its voice greatly resembles that of the Common Swallow in character, but is much more harsh.

The stomach is muscular and capacious, and the food consists of insects generally.

The season of incubation is from September to December. The situation of the nest is much varied; I have seen one placed in a thickly foliated bough near the ground, while others were in a naked fork, on the side of the bole of a tree, in a niche formed by a portion of the bark having been separated from the trunk, &c. The nest is rather shallow, of a rounded form, about five inches in diameter, and composed of fine twigs neatly lined with fibrous roots. I observed that the nests found in Van Diemen's Land were larger, more compact and more neatly formed than those on the continent of Australia; and one which was shown me by Mr. Justice Montague on his picturesque estate at Kangaroo Point, near Hobart Town, was placed at the extremity of a small leafy branch, as represented in the Plate.

The eggs are generally four in number; they differ much in the disposition of their markings; their ground-colour is dull white, spotted and dashed with dark umber-brown; in some a second series of greyish spots appear as if beneath the surface of the shell; their medium length is eleven lines, and breadth eight lines.

Head, neck, and the whole of the body fuliginous grey; wings dark bluish black, the external edges of the second, third and fourth primaries white; tail bluish black, all the feathers except the two middle ones largely tipped with white; irides dark brown; bill blue with a black tip; feet mealy lead-colour.

The sexes are alike in the colouring of their plumage, and are only to be distinguished by the female being somewhat smaller in size.

The young have an irregular stripe of dirty white down the centre of each feather of the upper surface, and are mottled with the same on the under surface.

The Plate represents a male and female of the natural size.



ARTAMUS MINOR: Vieill.

ARTAMUS MINOR, Vieill.

Little Wood Swallow.

Artamus minor, Vieill. Nouv. Dict. d'Hist. Nat., tom. xvii. p. 298.—Ib. Ency. Méth., Part II. p. 759.

Ocypterus fuscatus, Valenc. Mém. du Mus. d'Hist. Nat., tom. vi. p. 24. t. 9. fig. 1.

Leptopteryx minor, Wagl. Syst. Av., sp. 6.

Ocypterus minor, Gould, Syn. Birds of Australia, Part I. fig. 1.

IN its structure and in the disposition of the markings of its plumage, this species offers a greater resemblance to the *Artamus sordidus* than to any other member of the group; the habits of the two species are also very similar; if any difference exists, it is that the present bird is still more aerial, a circumstance indicated by the more feeble form of the foot, and the equal, if not greater, development of the wing. During fine weather, and even in the hottest part of the day, it floats about in the air in the most easy and graceful manner, performing in the course of its evolutions many beautiful curves and circles, without the least apparent motion of the wings, whose silvery whiteness as seen from beneath, together with the snowy tips of its wide-spread tail, offer a strong contrast to the dark colouring of the other parts of its plumage.

I found it abundant on the Lower Namoi, particularly on the plains thinly studded with the *Acacia pendula* and other low trees in the neighbourhood of Gummel-Gummel, where it had evidently been breeding, as I observed numerous young ones, whose primaries were not sufficiently developed to admit of their performing a migration of any distance; besides which, they were constantly being fed by the parents, who were hawking about in the air over and around the trees, while the young were quietly perched on some dead twig, as represented in the accompanying Plate, where two adults and three young are figured, in the manner in which they are seen huddled together in a state of nature.

I have not yet heard of this species having been seen within the prescribed limits of the colony of New South Wales, neither is it a native of Southern or Western Australia.

I have received two specimens from Port Essington, and I believe the examples in the Paris Museum were from Timor, which proves that it has a wide range northwards of the Namoi; and I shall not be surprised if future research should ascertain it to be very generally distributed over the interior of the Australian continent, not as a summer visitant only, but as a permanent resident.

The sexes are alike in plumage, but the young differ considerably, as shown in the Plate, a reference to which will give a more correct idea of their appearance and markings than any description.

The whole of the head, back, and abdomen chocolate-brown; wings, rump, and under tail-coverts bluish black; tail deep bluish black, all the feathers except the two outer and two middle ones tipped with white; bill beautiful violet-blue at the base, darker at the tip; irides and feet nearly black.

The figures are of the natural size.



ARTAMUS CINEREUS: Vieill.

J. Gould and H.C. Richter del.

C. Hullmandel Imp.

ARTAMUS CINEREUS, Vieill.

Grey-breasted Wood Swallow.

Artamus cinereus, Vieill. Nouv. Dict. d'Hist. Nat., tom. xvii. p. 297.—Ib. Ency. Méth., Part II. p. 758.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 211.

Ocypterus cinereus, Valanc. Mém. du Mus. d'Hist. Nat., tom. vi. p. 22. t. 9. fig. 1.

Be-wö-wen, Aborigines of the lowland and mountain districts of Western Australia.

Wood Swallow of the colonists of ditto.

THIS bird exceeds in size all other of the Australian Wood Swallows, and as far as I am aware (not having seen the species from Madagascar, figured in the “Planches Enluminées,”) is the largest of the genus. Its large tail, most of the feathers of which are broadly tipped with white, as well as the colouring of its plumage, at once point out its close affinity to the *Artamus sordidus* and *Artamus minor*. Like them it possesses a very extensive range of habitat, Mr. Robert Brown having found it at Broad Sound on the east, and Mr. Gilbert on the west coast; it is also a native of Timor.

In Western Australia, although a very local, it is by no means an uncommon species, particularly at Swan River, where it inhabits the limestone hills near the coast, and the “Clear Hills” of the interior, assembling in small families, and feeding upon the seeds of the *Xanthorrhæa*, which proves that insects do not form the sole diet of this species; with such avidity in fact does it devour the ripe seeds of this grass-tree, that several birds may frequently be seen crowded together on the perpendicular seed-stalks of this plant busily engaged in extracting them; at other times, particularly among the limestone hills, where there are but few trees, it descends to the broken rocky ground in search of insects and their larvæ.

It breeds in October and November, making a round compact nest, in some instances of fibrous roots, lined with fine hair-like grasses, in others of the stems of grasses and small plants; it is built either in a scrubby bush or among the grass-like leaves of the *Xanthorrhæa*, and is deeper and more cup-shaped than those of the other members of the group. The eggs are subject to considerable variation in colour and in the character of their markings; they are usually bluish-white, spotted and blotched with lively reddish brown, intermingled with obscure spots and dashes of purplish grey; all the markings being most numerous towards the larger end; they are about eleven lines long by eight lines broad.

The sexes are alike in colour, and can only be distinguished from each other with certainty by dissection. I have remarked that specimens from Timor rather exceed in size those collected on the Australian continent, and are somewhat lighter in colour; but these variations are too slight to be regarded as specific.

Crown of the head, neck, throat and chest grey, passing into sooty grey on the abdomen; space between the bill and the eye, the fore-part of the cheek, the chin, the upper and under tail-coverts jet-black; two middle tail-feathers black; the remainder black, largely tipped with white, with the exception of the outer feather on each side, in which the black colouring extends on the outer web nearly to the tip; wings deep grey; primaries bluish grey; under surface of the shoulder white, passing into grey on the under side of the primaries; irides dark blackish brown; bill light greyish blue at the base, black at the tip; legs and feet greenish grey.

The figures are those of a male and a female of the natural size.



ARTAMUS ALBIVENTRIS: *Could.*

J. Gould and H. C. Richter del et lith.

Hallman del & Walton Imp.

ARTAMUS ALBIVENTRIS, *Gould.*

White-vented Wood-Swallow.

Artamus albiiventris, Gould in Proc. of Zool. Soc., March 23, 1847.

Two examples of this species are all that have come under my notice; one of these was killed on the Darling Downs in New South Wales, and the other some distance to the northward of that locality, it being one of the birds procured during Dr. Leichardt's expedition to Port Essington. Its nearest ally is the *Artamus cinereus*, a species inhabiting the opposite side of the continent; but it is somewhat smaller, and may moreover be distinguished from that bird by the white under tail-coverts, and the lighter colour of the lower part of the abdomen. I regret that I have no information to communicate respecting its habits and economy; they are doubtless very similar to those of its representative above alluded to.

Lores, space beneath the eye and the chin deep black; head, neck and upper part of the back brownish grey; lower part of the back and the wings dark grey, becoming gradually deeper towards the tips of the feathers; primaries and secondaries narrowly edged with white at the tip; under surface of the wing white; ear-coverts, chest and abdomen pale grey, passing into white on the under tail-coverts; upper tail-coverts and tail black; the apical third of all but the two middle ones white; irides dark brown; bill yellowish horn-colour, becoming black at the tip; feet blackish brown.

The figures are of the natural size.



ARTAMUS PERSONATUS: Gould.

ARTAMUS PERSONATUS, *Gould.*

Masked Wood Swallow.

Ocypterus personatus, Gould. in Proc. of Zool. Soc., Part VIII. p. 149.

Jil-bung, Aborigines of the mountain districts of Western Australia.

I HAVE much pleasure in adding this new and highly interesting species of *Artamus* to the Wood Swallows of Australia, a country peculiarly adapted for this tribe of birds, and of which the fauna comprises a greater number of species of this group than that of any other. My knowledge of the range of this species is very limited; a single specimen was sent me from South Australia, while the fine examples from which my figures were taken were killed by Mr. Gilbert in the colony of Swan River. Its richly coloured black face and throat, separated from the delicate grey of the breast by a narrow line of snowy white, at once distinguishes it from every other species, while the strong contrast of these colours renders it a conspicuous object among the trees.

In size and structure it more nearly resembles the *Artamus superciliosus* than any other, and the two species form beautiful analogues of each other, one being in all probability confined to the eastern portion of the country, and the other to the western.

“ I have only met,” says Mr. Gilbert, “ with this species in the York and Zoodyay districts. It is very like *Artamus sordidus* in its habits, but is more shy and retired, never being seen but in the most secluded parts of the bush. It is merely a summer visitant here, generally making its appearance in the latter part of October, and immediately commencing the task of incubation. Its voice very much resembles the chirping of the English Sparrow.

“ Its nest is placed in the upright fork of a dead tree, or in the hollow part of the stump of a grass-tree; it is neither so well nor so neatly formed as those of the other species of the group, being a frail structure externally composed of a very few extremely small twigs, above which is a layer of fine dried grasses. The eggs also differ as remarkably as the nest, their ground colour being light greenish grey, dashed and speckled with hair-brown principally at the larger end, and slightly spotted with grey, appearing as if beneath the surface of the shell; they are ten and a half lines long by eight and a half lines broad. I found two nests in a York Gum Forest, about five miles to the east of the Avon River: each of these contained two eggs, which I believe is the usual number.

“ Its food consists of insects generally and their larvæ.”

The male has the face, ear-coverts and throat jet-black, bounded below with a narrow line of white; crown of the head sooty black, gradually passing into the deep grey, which covers the whole of the upper surface, wings and tail; the latter tipped with white; all the under surface very delicate grey; thighs dark grey; irides blackish brown; bill blue at the base, becoming black at the tip; legs and feet mealy bluish grey.

The female differs in having the colouring of the bill and the black mask on the face much paler.

The figures are those of a male and a female of the natural size.



ARTAMUS SUPERCILIOSUS: Gould.

I. Gould and H. C. Richter del.^r

C. Hulmandel Imp.^r

ARTAMUS SUPERCILIOSUS, *Gould.*

White Eye-browed Wood Swallow.

Ocypterus superciliosus, Gould in Proc. of Zool. Soc., Part IV. 1836, p. 142; and in Syn. Birds of Australia, Part I. fig. 2.

THERE is no species of *Artamus* yet discovered to which the present yields the palm, either for elegance of form or for the beauty and variety of its plumage; the only known species with which it could be confounded is the *Artamus rufiventer*, an Indian bird with the breast similarly marked, but which is entirely destitute of the superciliary stripe of white, which has suggested the specific name; in this character and in the rich chestnut colouring of the breast, it differs from every member of its tribe inhabiting Australia. I am unable to say what is the extent of its range, but I am induced to believe that it is confined to Australia, and that in all probability it seldom leaves the interior of the country; the extreme limits of the colony of New South Wales, particularly those which border the extensive plains, being the only parts where it has yet been observed. I first met with it at Yarrundi on the Dartbrook, a tributary of the Hunter, where it was thinly dispersed among the trees growing on the stony ridges bordering the flats.

From this locality to as far as I penetrated northwards on the Namoi, as well as in the direction of the River Peel, it was distributed in similar numbers, intermingled with the *Artamus sordidus*, at about the ratio of one hundred pairs to the square mile, the two species appearing to live and perform the task of incubation in perfect harmony, both being frequently observed on the same tree. In their dispositions, however, and in many of their actions they are somewhat dissimilar; the bird forming the subject of the present Plate being much more shy and difficult of approach than the *Artamus sordidus*, which is at all times very tame; it also gives a preference to the topmost branches of the highest trees, from which it sallies forth for the capture of insects, and to which it again returns, in the usual manner of the tribe. In every part where I have observed it, it is strictly migratory, arriving in summer, and departing northwards after the breeding-season.

The nest is ever most difficult of detection, being generally placed either in a fork of the branches or in a niche near the bole of the tree, whence the bark had been partially stripped. It is a round, very shallow and frail structure, composed of small twigs and lined with fibrous roots; those I discovered contained two eggs, but I had not sufficient opportunities for ascertaining if this number was constant. Their ground-colour is dull buffy white, spotted with umber-brown, forming a zone near the larger end; in some these spots are sparingly sprinkled over the whole surface; they have also the obscure grey spotting like those of *A. sordidus*; the eggs are rather more than eleven lines long by eight and a half lines broad.

The male has the lores, space surrounding the eye, and the ear-coverts deep black; chin greyish black passing into blackish grey on the chest; crown of the head greyish black; over each eye a pure white stripe commencing in a point, and gradually becoming wider or spatulate in form as it proceeds towards the occiput; all the upper surface, wings and tail fuliginous grey, which is lightest on the rump and tail; all the tail-feathers tipped with white, except the outer web of the lateral feather, which is grey; under surface of the wing pure white; all the under surface rich deep chestnut; irides nearly black; bill light blue at the base, black at the tip; feet dark lead-colour.

The female has a similar distribution of colouring, but differs from her mate in the following particulars: lores and a ring surrounding the eye jet-black; only an indication of the superciliary stripe; throat grey; tail not so distinctly tipped with white; under surface light chestnut-red.

The figures are those of a male and a female of the natural size.

ARTAMUS LEUCOPYGIALIS: *Gould.*

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ARTAMUS LEUCOPYGIALIS, *Gould.*

White-rumped Wood Swallow.

Artamus leucopygialis, Gould in Proc. of Zool. Soc., February 8, 1842.

ON a careful comparison of specimens of the White-rumped *Artami* from India and the Indian Archipelago with those killed in Australia, I cannot but consider that at least two, if not three, species have been confounded under one name, and that the Australian bird had remained undescribed until characterized by me at the Meeting of the Zoological Society above quoted. The present species is most nearly allied to the *Artamus leucorhynchus*, but is readily distinguished from it by the blue colour of the bill; and I may here remark, that all the Australian birds have the bill fine pale blue, and are also considerably smaller in all their admeasurements than those of the islands to the northwards.

Van Diemen's Land and Western Australia are the only colonies in which this bird has not been observed; its range, therefore, over the continent may be considered as very general: in South Australia and New South Wales it would appear to be migratory, visiting those parts in summer for the purpose of breeding. Among other places where I observed it in considerable abundance was Mosquito, and the other small islands near the mouth of the Hunter, and on the borders of the rivers Mokai and Namoi, situated to the northward of Liverpool Plains; in these last-mentioned localities it was breeding among the large flooded gum-trees bordering the rivers.

The breeding-season commences in September and continues until January, during which period at least two broods are reared. In the Christmas week of 1839, at which time I was on the plains of the interior, in the direction of the Namoi, the young progeny of the second brood were perched in pairs or threes together, on a dead twig near their nest, as represented in the Plate. They were constantly visited and fed by the adults, who were hawking about for insects in great numbers, some performing their evolutions above the tops and among the branches of the trees, while others were sweeping over the open plain with great rapidity of flight, making in their progress through the air the most rapid and abrupt turns; at one moment rising to a considerable altitude and the next descending to within a few feet of the ground, as the insects of which they were in pursuit arrested their attention. In the brushes, on the contrary, the flight of this bird is more soaring and of a much shorter duration, particularly when hawking in the open glades, which frequently teem with insect life. When flying near the ground the white mark on the rump shows very conspicuously, and strikingly reminds one of the House Marten of our own country.

Two nests, taken in November on a small island in Coral Bay, near the entrance of the harbour at Port Essington, were compactly formed of dried wiry grass and the fine plants growing on the beach; they were placed in a fork of a slender mangrove-tree within fifteen feet of the water, in which they were growing; but like several other Australian birds, the *Artamus leucopygialis* often avails itself of the deserted nests of other species instead of building one of its own. Most of those I found breeding on the Mokai had possessed themselves of the forsaken nest of the *Grallina Melanoleuca*, which they had rendered warm and of the proper size by slightly lining it with grasses, fibrous roots, and the narrow leaves of the *Eucalypti*. The eggs are generally three in number, are much lighter in colour, and more minutely spotted than those of any other species of the genus I have seen; their ground-colour is flesh-white, finely freckled and spotted with faint markings of reddish brown and grey, in some instances forming a zone at the larger end: their medium length is ten lines, and breadth seven lines and a half.

The sexes are only to be distinguished by dissection, and may be described thus: head, throat and back sooty grey; primaries and tail brownish black washed with grey; chest, all the under surface and rump pure white; irides brown; bill light bluish grey at the base, black at the tip; legs and feet mealy greenish grey.

The Plate represents a male, a female, two young ones and a nest of the natural size.



DICEUM HIRUNDINACEUM.

DICÆUM HIRUNDINACEUM.

Swallow Dicæum.

- Sylvia hirundinacea*, Shaw, Nat. Misc., vol. iv. pl. 114.—Lath. Ind. Orn. Supp., p. lv.
Swallow Warbler, Lath. Gen. Syn. Supp., vol. ii. p. 250.—Shaw, Gen. Zool., vol. x. p. 613.
Pipra Desmaretii, Leach, Zool. Misc., vol. i. p. 94. pl. 41.
Crimson-throated Honey-sucker, Lewin, Birds of New Holl., pl. 7.
Desmaretian Manakin, Shaw, Gen. Zool., vol. x. p. 18.—Lath. Gen. Hist., vol. vii. p. 240.
Dicæum atrogaster, Less. Traité d'Orn., p. 303.
Moo-ne-jê-tang, Aborigines of the lowland districts of Western Australia.
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By far the greater number of the colonists of Australia are, I am sure, totally unacquainted with this beautiful little bird, yet there is scarcely an estate in either of the colonies in which it may not be found as a permanent resident or an occasional visitor: a closer examination of the birds, and other natural objects with which we are most nearly surrounded, would at all times repay with interest the trouble of their investigation.

The natural disposition of this species leading it to confine itself almost exclusively to the topmost branches of the loftiest trees, is doubtless the cause of its not being more generally observed; its rich scarlet breast, so strongly contrasting with the other parts of its plumage, not even attracting notice at the distance from the ground at which it generally keeps; and, in obtaining specimens, I was more frequently made aware of its presence by its pretty warbling song than by its movements among the branches; so small an object, in fact, is most difficult of detection among the thick foliage of the lofty *Casuarinæ*, to which trees it is extremely partial, particularly to those growing on the banks of creeks and rivers. It is also frequently to be seen among the branches of the beautiful parasite figured in the accompanying Plate: this charming *Loranthus* was gathered at Dartbrook, on the Upper Hunter, where it is very common on the *Casuarinæ*. Whether the bird is attracted to this misseltoe-like parasite, like many others, for the purpose of feeding upon its sweet and juicy berries, I could not fully make out; its chief food is insects, but in all probability it may partially feed on these fruits also.

The Swallow Dicæum has neither the actions of the Pardalotes nor of the Honey-eaters; it differs from the former in its quick darting flight, and from the latter in its less prying, clinging and creeping actions among the leaves, &c. When perched on a branch it sits more upright, and is more Swallow-like in its contour than either of the forms alluded to; the structure of its nest and the mode of its nidification are also very dissimilar.

Its song is a very animated and long-continued strain, but is uttered so inwardly, that it is almost necessary to stand beneath the tree upon which the bird is perched, before its notes can be heard.

It would appear that the range of this species extends to all parts of the Australian continent, since I have received specimens from every locality yet explored by Europeans. I found it breeding on the Lower Namoi, which proves that the interior of the country is inhabited by it as well as those portions between the ranges and the coast.

Its beautiful purse-like nest, of which the drawing will give a far better idea than the most minute description, is composed of the white cotton-like substance found in the seed-vessels of many plants, and among other trees is sometimes suspended on a small branch of a *Casuarina*, or an *Acacia pendula*. It was on the latter tree that I found a nest containing three or four young; a second nest with the eggs was given to me in Sydney. The ground-colour of the eggs is dull white, with very minute spots of brown scattered over the surface; they are nine lines long by five and a half lines broad.

The male has the head, all the upper surface, wings and tail black, glossed with steel-blue; primaries black; throat, breast, and under tail-coverts scarlet; flanks dusky; abdomen white, with a broad patch of black down the centre; irides dark brown; bill blackish brown; feet dark brown.

The female is dull black above, glossed with steel-blue on the wings and tail; throat and centre of the abdomen buff; flanks light brown; under tail-coverts pale scarlet.

The figures are of the natural size, on a branch of the *Loranthus* above mentioned, which I believe to be an undescribed species.



PARDALOTUS PUNCTATUS: Jüill.

PARDALOTUS PUNCTATUS, *Temm.*

Spotted Pardalote.

Pardalotus punctatus, Temm., Man., Part I. p. lxx.—Id. Pl. Col., 78.—Vieill. Gal. des Ois., tom. i. pl. 73.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 237.—Gould, Syn. Birds of Australia, Part II.

Pipra punctata, Lath. Ind. Orn., Supp., p. lvi. No. 1.—Shaw, Nat. Misc., p. 111.—Id. Zool., vol. x. p. 30.

Speckled Manikin, Lath. Gen. Syn. Supp., vol. ii. p. 253.—Id. Gen. Hist., vol. vii. p. 238.

Wê-dup-wê-dup, Aborigines of the lowland districts of Western Australia.

Diamond Bird, Colonists of New South Wales.

No species of the genus to which this bird belongs is more widely and generally distributed than the Spotted Pardalote; it inhabits the whole of the southern parts of the Australian continent from the western to the eastern extremities of the country, and is very common in Van Diemen's Land. It is nearly always engaged in searching for insects among the foliage, both of trees of the highest growth and of the lowest shrubs; it frequents gardens and enclosures as well as the open forest; and is exceedingly active in its actions, clinging about in every variety of position both above and beneath the leaves with equal facility.

With regard to the nidification of this species, it is a singular circumstance, that in the choice of situation for the reception of its nest, it differs from every other known member of the genus; for while they always place their nests in the holes of trees, this species descends to the ground, and availing itself of any little shelving bank that occurs in its vicinity, excavates a hole just large enough to admit of the passage of its body, in a nearly horizontal direction to the depth of two or three feet, at the end of which a chamber is formed in which the nest is deposited. The nest itself is a neat and beautifully built structure, formed of strips of the inner bark of the *Eucalypti*, and lined with finer strips of the same or similar materials; it is of a spherical contour, about four inches in diameter, with a small hole in the side for an entrance. The chamber is generally somewhat higher than the mouth of the hole, by which means the risk of its being inundated upon the occurrence of rain is obviated. I have been fortunate enough to discover many of the nests of this species, but they are most difficult to detect, and are only to be found by watching for the egress or ingress of the parent birds from or into its hole or entrance, which is frequently formed in a part of the bank overhung with herbage, or beneath the overhanging roots of a tree. How so neat a structure as is the nest of the Spotted Pardalote, should be constructed at the end of a hole where no light can possibly enter is beyond our comprehension, and is one of those wonderful results of instinct so often presented to our notice in the history of the animal creation, without our being in any way able to account for them. The present species rears two broods in the course of the year, the eggs upon each occasion being four or five in number, rather round in form, of a beautiful polished fleshy white, seven and a half lines long by six and a half lines broad.

Its voice is a rather harsh piping note of two syllables often repeated.

The male has the crown of the head, wings, and tail black, each feather having a round spot of white near the tip; a stripe of white commences at the nostrils and passes over the eye; ear-coverts and sides of the neck grey; feathers of the back grey at the base, succeeded by a triangular-shaped spot of fawn-colour, and edged with black; rump rufous brown; upper tail-coverts crimson; throat, chest, and under tail-coverts yellow; abdomen and flanks tawny; irides dark brown; bill brownish black; feet brown.

The female may be distinguished by the less strongly contrasted tints of her colouring, and by the absence of the bright yellow on the throat.

The figures represent the two sexes of the natural size.



PARDALIPICUS RUFICEPS Gould

J. Gould and H.C. Richter del. & lith.

Hallman del. & Wallen imp.

PARDALOTUS RUBRICATUS, *Gould.*

Red-lored Pardalote.

Pardalotus rubricatus, Gould in Proc. of Zool. Soc., Part V. p. 149 ; and in Syn. Birds of Australia, Part IV.

ALL the information I have to communicate respecting this new and beautiful Pardalote, which I have named *rubricatus*, from the red spot before the eye, is, that I procured a single specimen at Liverpool from among some other birds, all of which had been brought from the east coast of Australia : no other example has come under my notice, and it may probably be the only one in Europe. It belongs to the same section of the *Pardaloti* as the *P. punctatus* and *P. quadragintus*, and like them is distinguished from the other members of the group by the absence of the sealing-wax-like tips of the spurious wing-feathers,—a character which is constant in the *P. uropygialis*, *P. affinis*, *P. striatus* and *P. melanocephalus*. It is the largest species of the genus yet discovered, all the members of which are confined to Australia ; and is readily distinguished from its near allies the *P. punctatus* and *P. quadragintus* by the larger size of the spots on the crown, and by its having less yellow on the throat than the former, and more than the latter.

As nothing whatever is at present known respecting it, it is one of those species I would especially recommend to the notice of those favourably situated for observing it.

Forehead crossed by a narrow band of dirty white ; crown and back of the head deep black, each feather having a spot of white near its extremity ; back of the neck, back, wing-coverts and rump brownish grey ; wings dark brown, margined with pale brown, the spurious wing, a small portion of the base of the primaries, and the outer margins of the secondaries fine golden orange ; immediately before the eye a spot of bright, fiery orange ; above and behind the eye a stripe of buff ; upper tail-coverts bright olive-green ; tail deep blackish brown, the extreme tips of the feathers being white ; throat and abdomen greyish white ; chest bright yellow ; upper mandible and legs brown, under mandible greyish white.

The bird is represented in two positions, of the natural size, on a plant gathered in New South Wales.



PARDALOTUS QUADRAGINTUS: Gould

J. Gould and H.C. Richter del et lith.

C. Hallman del. Imp.

PARDALOTUS QUADRAGINTUS, *Gould.*

Forty-spotted Pardalote.

Pardalotus quadragintus, Gould in Proc. of Zool. Soc., Part V. p. 148 ; and in Syn. Birds of Australia, Part IV.
Forty-spot, Colonists of Van Diemen's Land.

THIS species is peculiar to Van Diemen's Land, where it inhabits the almost impenetrable forests which cover that island, particularly those of its southern portion. It is I think less numerous than its congener, the *Pardalotus affinis*, and appears to confine itself more exclusively to the highest gum-trees than that species. I found it very abundant in the gulleys under Mount Wellington, and observed it breeding in a hole in one of the loftiest trees, at about forty feet from the ground ; I afterwards took a perfectly developed white egg from the body of a female killed on the 5th of October. The weight of this little bird was rather more than a quarter of an ounce ; the stomach was muscular, and contained the remains of the larvæ of lepidoptera, which with coleoptera and other insects constitute its food.

It has a simple piping kind of note of two syllables.

In its actions it much resembles the Tits of Europe, creeping and clinging among the branches in every direction.

The eggs are white and nearly round in form, being seven lines and a half long and six broad.

The sexes are so much alike in colour, that a separate description is unnecessary.

Crown of the head and all the upper surface bright olive-green, each feather obscurely margined with brown ; wings brownish black, all the feathers except the first and second primaries having a conspicuous spot of pure white near their extremities ; tail blackish grey, the extreme tips of the feathers being white ; cheeks and under tail-coverts yellowish olive ; throat and under surface greyish white, passing into olive on the flanks ; irides dark brown ; bill brownish black ; feet brown.

The figures are of the natural size.



PARDALOTUS STRIATUS: Vig. & Horsf.

J. Gould and H. C. Richter del. & lith.

E. Hallman del. & lith.

PARDALOTUS STRIATUS, *Temm.*

Striated Pardalote.

Pardalotus striatus, Temm. Man., Part I. p. lxx.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 237. note.—Gould, Syn. Birds of Australia, Part II.

Pipra striata, Lath. Ind. Orn., p. 558. No. 13.—Gmel. Syst., vol. i. p. 1003.

Striped-headed Manakin, Lath. Gen. Syn., vol. iv. p. 526. pl. 54.—Id., Supp., p. 188.—Shaw, Zool., vol. x. p. 29. pl. 4.—Lath. Gen. Hist., vol. vii. p. 237. pl. 109.?

Pardalotus ornatus, Temm. Pl. Col. 394. fig. 1.

Wè-dup-wè-dup, Aborigines of the lowland, and

Wè-dee-wè-due, Aborigines of the mountain districts of Western Australia.

THIS beautiful species, like the *P. punctatus*, enjoys an extensive range of habitat, being found in all parts of the southern portion of the Australian continent; it has not as yet been discovered in Van Diemen's Land, its place in that island being apparently occupied by the *P. affinis*. I have carefully examined specimens killed at Swan River with others from New South Wales, and I cannot find the slightest difference either in their size or markings. It will be interesting to know how far this species and the *P. punctatus* extend their range northwards, a point which can only be ascertained when the country has been fully explored. The *P. uropygialis* is the only species that has yet been discovered on the north coast. This active little bird is generally seen seeking insects among the leaves, for which purpose it frequents trees of every description, but gives a decided preference to the *Eucalypti*. Its flight is rapid and darting, hence it passes from tree to tree, or from one part of the forest to another with the greatest ease. Its voice is a double note several times repeated.

The nest, which is a very neat structure of dried soft grasses and the bark of the tea-tree, lined with feathers, is usually placed in a hole of a dead branch, but sometimes in the boll of the tree. It breeds in September, October and November, and lays three or four fleshy-white eggs, which are nine lines long by seven lines broad.

The sexes so closely assimilate in colour and markings that they are only to be distinguished by dissection.

The young assume the adult colouring from the nest, but have the tips of the spurious wing orange instead of red.

Forehead and crown of the head black, the feathers of the latter having a stripe of white down the centre; a stripe of deep orange-yellow commences at the base of the upper mandible and runs above the eye, where it is joined by a stripe of white which leads to the occiput; back of the neck and back brownish olive-grey; rump and upper tail-coverts yellowish brown; wings black, the external edges of the third, fourth, fifth, sixth and seventh primaries white at their base and tipped with white; secondaries margined with white and reddish brown; tail black, each feather tipped with white; sides of the face and neck grey; throat and upper part of the chest yellow; centre of the abdomen white; flanks and under tail-coverts brownish buff, the former tinged with yellow; irides brownish red; bill at the tip and along the culmen dark brown tinged with blue, the remainder yellowish white; legs and feet greenish grey.

The Plate represents a male, a female, and three young birds of the natural size.



PARDALOTUS AFFINIS: Gould.

PARDALOTUS AFFINIS, *Gould.*

Allied Pardalote.

Pipra striata? Gmel. et Auct.

Striped-headed Manakin, Shaw, Gen. Zool., vol. x. p. 29, pl. 4.—Lath. Gen. Hist., vol. vii. p. 237, pl. cix.

Pardalotus affinis, Gould in Proc. of Zool. Soc., Part V. 1837, p. 25.—Syn. Birds of Australia, Part II.

THE *Pardalotus affinis* is distinguished by the yellow tips of its spurious wings and by the margin of the third primary only being white. The bird figured by Shaw and Latham, as quoted above, has in all probability reference to the present species, but not, in my opinion, to the *Pipra striata* of Gmelin, whose description does not agree with the Van Diemen's Land bird, or with any of those from New South Wales; he distinctly states that the tips of some of the wing-coverts are yellow, and that the spurious wing is tipped with white, and, moreover, adds that it is a native of South America.

The Allied Pardalote is distributed over every part of Van Diemen's Land, and may be regarded as the commonest bird of the island: wherever the gum and wattle exist there also may the bird as certainly be found; giving no decided preference to trees of a high or low growth, but inhabiting alike the sapling and those which have attained their greatest altitude. It displays great activity among the branches, clinging and creeping about in the most easy and elegant manner, examining both the upper and under sides of the leaves with the utmost care in search of insects. It is equally common in all the gardens and shrubberies, even those in the midst of the towns, forming a familiar and pleasing object, and enlivening the scenery with its sprightly actions, and piping, though somewhat monotonous note. Its food consists of seeds, buds, and insects, in procuring which its most elegant actions are brought into play.

I am led to believe that it is strictly confined to Van Diemen's Land and the islands in Bass's Straits, having never observed it on the mainland, or seen specimens in any one of the numerous collections I have examined from New South Wales.

The season of nidification occupies at least four months, during which two or more broods are reared. Eggs may be found in September, and on reference to my journal I find that near George Town, on the 8th of January, I took from a nest in the hole of a tree five fully-fledged young. The nest in this instance was of a large size, and of a round domed form like that of the Wren, with a small hole for an entrance; it was outwardly composed of grasses and warmly lined with feathers. The eggs vary from three to five in number, and are of a beautiful white, nine lines long by seven lines in diameter.

The holes selected for the nest are sometimes high up in the loftiest trees, at others within a few feet of the ground. The young birds have the tips of the spurious wing orange instead of yellow; and although the whole plumage possesses the same character as that of the adults, the markings are less brilliant and well-defined. The sexes offer no observable difference in their colouring by which they can be distinguished.

Forehead and crown of the head black, the latter with a stripe of white down the centre of each feather; a stripe of yellow commences at the base of the upper mandible, and runs above the eye, where it is joined by a stripe of white, which proceeds nearly to the occiput; back of the neck and back greyish olive brown; rump and upper tail-coverts olive brown; wings black, each of the primaries slightly tipped with white, and the third externally edged with white; the secondaries edged with white and rufous, and the tips of the spurious wing yellow; tail blackish brown, each feather having a transverse mark of white at the tip; ear-coverts and cheeks grey; throat yellow, passing into lighter yellow on the flanks; centre of the abdomen white; irides olive brown; bill black; feet brown.

The figures are of the natural size.



PARDALOTUS MELANOCEPHALUS; Gould.

J. Gould and E. C. Richter del et lith.

Hallman del. & Walton. Lit.

PARDALOTUS MELANOCEPHALUS, *Gould.*

Black-headed Pardalote.

Pardalotus melanocephalus, Gould in Proc. of Zool. Soc., part v. p. 149 ; and in Syn. Birds of Australia, Part IV.

I HAVE received numerous examples of this species from Moreton Bay, where it probably takes the place of the *P. striatus*, from which it is distinguished by the black colouring of its head and by its thicker bill, but to which it is very nearly allied, as well as to the *P. uropygialis* ; it is in fact directly intermediate between the two, having the black head of the latter without the yellow colouring of the rump. There is no external difference in the sexes.

Nothing whatever is known of its history.

Crown of the head, lores and ear-coverts black ; over each eye a stripe commencing at the nostrils, the anterior half of which is orange, and the posterior white ; sides of the face and neck white ; back of the neck and back olive-grey ; upper tail-coverts brownish buff ; tail black, each feather tipped with white ; wings blackish brown, the third, fourth, fifth, sixth and seventh primaries white ; secondaries edged and tipped with white ; one of the wing-coverts broadly margined on the inner web with white, forming an oblique line across the shoulder ; spurious wing tipped with crimson ; line down the centre of the throat, the breast and middle of the abdomen bright yellow ; vent and under tail-coverts buff ; bill black ; feet brown.

The figures are of the natural size.



PARDALOTUS UROPYGIALIS: *Gould.*

J. & E. Gould del.

C. Hullmandel imp.

PARDALOTUS UROPYGIALIS, *Gould.*

Yellow-rumped Pardalote.

Pardalotus uropygialis, Gould in Proc. of Zool. Soc., Part VII. 1839, p. 143.

For this very beautiful Pardalote, and several other interesting birds from the north-west coast of Australia, I am indebted to the kindness of Benjamin Bynoe, Esq., Surgeon of Her Majesty's Surveying Ship the Beagle; to Captain Wickham and the other officers of which vessel my thanks are also due for their polite attention to my wishes, and the promise of communicating to me any novelties they might procure during their survey of the north-west coast.

The Yellow-rumped Pardalote is easily distinguished from every other species of the group with which I am acquainted, amounting to seven or eight in number, by the bright yellow colouring of the rump, by the rich spot of orange before the eye, by having a shorter wing, and by being more diminutive in size than any of the others, with the exception of *Pardalotus punctatus*. It is more closely allied to my *Pardalotus melanocephalus* than any other species; but as the latter is without the yellow on the rump, and has a larger bill, I am induced to regard them as distinct.

I am unable to give any account of its habits and manners, but in these respects it doubtless closely assimilates to the other members of its group.

Crown of the head, stripe before and behind the eye black; lores rich orange; a mark from above the eye to the occiput, chest and centre of the abdomen white; throat and cheeks delicate crocus-yellow; rump and upper tail-coverts sulphur-yellow; back of the neck and back olive grey; wings black, the external webs of the second and five following primaries white at the base; tips of the spurious wing scarlet; tail black; the three outer feathers tipped with white, the white spreading largely over the inner web of the outer feathers; bill black; feet lead colour.

The sexes do not differ in size or in the colour of their plumage.

The figures are of the natural size.



STREPERA GRACILLINA: *Life*.

STREPERA GRACULINA.

Pied Crow-Shrike.

Réveilleur de l'Isle de Norfolk?, Dand., tom. ii. p. 267.

Corvus graculinus (White-vented Crow), White's Bot. Bay, pl. in p. 251.

Coracias strepera, Lath. Ind. Orn., vol. i. p. 173.

Corvus streperus, Leach, Zool. Misc., vol. ii. pl. 86.

Noisy Roller, Lath. Gen. Syn., Supp., vol. ii. p. 121.

Le Grand Calibé, Le Vaill. Ois. de Par., &c., pl. 24.

Cracticus streperus, Vieill. Gal. des Ois., pl. 109.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 261.

Gracula strepera, Shaw, Gen. Zool., vol. vii. p. 462.

Barita strepera, Temm. Man., part i. p. li.

Coronica strepera, Gould, Syn. Birds of Australia, Part I.

Strepera, Less. Traité d'Orn., p. 329.

Strepera graculina, G. R. Gray, Gen. of Birds, 2nd Edit., p. 50.

THIS species was originally described and figured in White's 'Voyage to New South Wales': it is consequently the oldest and most familiarly known member of the group to which it belongs. It is very generally distributed over the colony of New South Wales, inhabiting alike the brushes near the coast, those of the mountain ranges, and also the forests of *Eucalypti* which clothe the plains and more open country. As a great part of its food consists of seeds, berries and fruits, it is more arboreal in its habits than some of the other species of its group, whose structure better adapts them for progression on the ground, and whose food principally consists of insects and their larvæ. The habitat of the present bird appears to be confined to the south-eastern portions of the continent, where, as is the case with all birds whose range is so limited, it is a stationary species, merely moving from one district to another according to the season; at one time being more numerous on the open coast, and at another among the brushes, as each may offer it a greater variety or more abundant supply of food: the hilly portions of the country intersected with deep ravines are, however, decidedly its most congenial localities. Like the other members of the genus it is mostly seen in small companies, varying from four to six in number, seldom either singly or in pairs: I am not, however, inclined to consider them as gregarious birds in the strict sense of the word, believing as I do that each of these small companies is composed of a pair and their progeny, which appear to keep together from the birth of the latter until the natural impulse for pairing prompts them to separate.

Their flight is very different from that of the Crow, (which they much resemble in outward appearance) being much less protracted, and never of an elevated character; its utmost extent is from one part of the forest to another, or across a gully, in effecting which they sometimes pass over the tops of the trees, while at others they accomplish the distance by flitting from tree to tree. It is during flight that the markings of this bird are displayed to the greatest advantage, the strong contrast of its colours then rendering it a conspicuous object in the bush: while on the wing also it frequently causes the woods to ring with its peculiar noisy cry, by which its presence is often indicated when otherwise it would not be seen. On the ground it hops over the surface with the greatest facility.

The nest, which is usually constructed on the branches of low trees, sometimes even on those of the *Casuarinæ*, is of a large size, round, open, and cup-shaped, built of sticks and lined with moss and grasses; the eggs, which I was not so fortunate as to procure, are generally three or four in number.

The flesh of this species is frequently eaten by the colonists, and is by some considered a delicacy.

Of all the species of this singular and well-defined genus, the present, although not the largest in stature, is by far the handsomest, its markings being more clearly defined and the tints of its plumage more rich and contrasted than those of any of its congeners, the black being as deep as jet, and the white pure and unspotted; it differs also from all its allies yet discovered in having the basal half of the primaries and the basal half and the tips of the tail-feathers together with those portions of the shafts pure white.

The plumage of both sexes at all ages is so precisely similar, that by dissection alone can we distinguish the male from his mate, or the young from the adult; the female is, however, always a trifle less in all her admeasurements, and the young birds have the corners of the mouth more fleshy and of a brighter yellow than the adults.

All the plumage fine bluish black with the exception of the basal half of the primaries, the basal half and the tips of the tail-feathers, including those portions of their shafts and the under tail-coverts which are snow-white; irides beautiful yellow; bill and feet black.



STREPERA FULIGINOSA: Gould.

STREPERA FULIGINOSA, *Gould.*

Sooty Crow-Shrike.

Cracticus fuliginosus, Gould in Proc. of Zool. Soc., Part IV. p. 106.

Coronica fuliginosa, Gould in Syn. Birds of Australia, Part I.

Black Magpie, of the Colonists.

THE great stronghold of this species is the island of Van Diemen's Land, in which it is a permanent resident ; but its range extends to the islands in Bass's Straits, and a few individuals have been found in South Australia. Its browner colouring, more arched and gibbose bill, its smaller size, and the absence of the white colouring of the under tail-coverts and of the base of the primaries, are characters by which it may at once be distinguished from all the other members of the group. The localities it frequents are also of a different description, those preferred being low swampy grounds in the neighbourhood of the sea and woods bordering rivers. Like the other species of the genus, it subsists on insects and grubs of various kinds, to which pulpy seeds and berries are frequently added.

It is very active on the ground, running over the surface with a motion between a run and a hop with great rapidity.

It breeds in the low trees, constructing a large, deep and cup-shaped nest very similar to that of the European Crow, and lays three eggs, of a pale vinous brown marked all over with large irregular blotches of brown, one inch and five-eighths long by one inch and a quarter broad.

Its note is much less shrill than that of the *Strepera arguta*.

I have seen this bird in a state of captivity, and it appeared to bear confinement remarkably well.

The sexes present no visible difference except in size, the female being smaller than the male ; they may be thus described :—

All the plumage sooty black, with the exception of the ends of the primaries and all but the two middle tail-feathers, which are white ; irides bright yellow ; bill and feet black.

The figures are of the natural size.



STREPERA ARGUTA: *Gould.*

J. Gould and H.C. Richter del et lith.

Hallman del & Walton Imp.

STREPERA ARGUTA, Gould.

Hill Crow-Shrike.

Strepera arguta, Gould in Proc. of Zool. Soc., Part XIV. p. 19.

THE *Strepera arguta* is abundantly dispersed over Van Diemen's Land, but is more numerous in the central parts of the island than in the districts adjacent to the coast; it also inhabits South Australia, in which country it is more scarce, and all the specimens I have seen are rather smaller in size. I have never seen it in any part of New South Wales that I have visited, neither have specimens occurred in the numerous collections from the west coast that have come under my notice. It is the largest, the boldest and the most animated species of the genus yet discovered. If not strictly gregarious, it is often seen in small companies of from four to ten, and during the months of winter even a greater number are to be seen congregated together. The districts most suited to its habits are open glades in the forest and thinly-timbered hills: although it readily perches on the trees, its natural resort is the ground, for which its form is admirably adapted, and over which it passes with amazing rapidity, either in a succession of leaps or by running. Fruits being but sparingly diffused over Australia, insects necessarily constitute almost its sole food, and of these nearly every order inhabiting the surface of the ground forms part of its diet. It devours grasshoppers with great avidity, and as these insects are ever most abundant, the one would appear to be formed for the sustenance of the other.

Its note is a loud ringing and very peculiar sound, somewhat resembling the words *clink, clink*, several times repeated, and strongly reminded me of the distant sound of the strokes on a blacksmith's anvil; and hence the term *arguta* appeared to me to be an appropriate specific appellation for this new species.

All the nests I found of this species either contained young birds or were without eggs; I am consequently unable to give their size and colour. The nest, which is of a large size, is generally placed on a horizontal branch of a low tree; it is round, deep and cup-shaped, outwardly formed of sticks and lined with fibrous roots and other fine materials.

The sexes present no external difference whatever, neither is there much difference in size; the young are black from the nest, except that the tertiary feathers are strongly tipped with white, a character never I believe thrown off in adult age.

All the plumage brownish black, becoming much browner on the tips of the wing-feathers, and of a grey tint on the abdomen; base of the inner webs of the primaries and secondaries, the under tail-coverts and the apical third of the inner webs of the tail-feathers white; irides orange-yellow; bill and feet black; corner of the mouth yellow.

The Plate represents the bird about four-fifths of the size of life.



STREPERA ANATHIDENSIS.

STREPERA ANAPHONENSIS.

Grey Crow-Shrike.

Barita Anaphonensis, Temm. Pl. Col.—Less. Traité d'Orn., p. 345, Atlas, pl. 47. fig. 1.

Strepera plumbea, Gould in Proc. of Zool. Soc., Part XIV. p. 20.

Dje-läak, Aborigines of Western Australia.

Squeaker, of the Colonists.

HAVING formerly considered the Grey Crow-Shrikes of New South Wales and Western Australia as distinct species, I assigned to the Swan River bird the specific appellation of *plumbea*; subsequent research has, however, proved them to be identical: I am therefore under the necessity of adopting the name of *Anaphonensis*, previously applied to the species by my friend M. Temminck, and of sinking that of *plumbea* into a synonym.

No one species of the genus has so wide a range as the present, extending as it does from New South Wales on the east to Swan River on the west coast. It is, however, more local in its habitat than any of them, at least such is the case in New South Wales; for although it is tolerably abundant at Illawarra, at Camden, and in the park of C. Throsby, Esq., at Bong-bong, it was not seen in any other district that I visited. Mr. Gilbert states that he observed it in every part of Western Australia visited by him; and that he mostly met with it in the thickly wooded forests, singly or in pairs, feeding on the ground with a gait and manners very much resembling the Common Crow. Its flight is easy and long-sustained, and it occasionally mounts to a considerable height in the air.

Its note is a piercing shriek, very much resembling in sound the native name.

The stomach is very muscular, and the food consists of coleoptera and the larvæ of insects of various kinds.

It breeds in the latter part of September and the beginning of October, forming a nest of dried sticks in the thickest part of the foliage of a gum- or mahogany-tree and laying three eggs, the ground-colour of which is either reddish buff or wood-brown, marked over nearly the whole of the surface with blotches of a darker tint; their medium length is one inch and nine lines by one inch and two and a half lines broad.

The sexes resemble each other so closely in colour, that it is impossible to distinguish the one from the other, except by dissection.

All the upper surface leaden grey, becoming much darker on the forehead and lores; wings black; secondaries margined with grey and tipped with white; basal half of the inner webs of the primaries white, of the outer webs grey; the remainder of their length black, slightly tipped with white; tail black, margined with grey and largely tipped with white; all the under surface greyish brown; under tail-coverts white; irides orange; bill and feet black.

The figure represents a male of the natural size.



COMPTONIA TURBIDA, A. L. G. G. G.

GYMNORHINA TIBICEN.

Piping Crow-Shrike.

Coracias Tibicen, Lath. Ind. Orn., Supp., xxvii.—Shaw, Gen. Zool., vol. vii. p. 405.

Barita Tibicen, Temm. Man., part i. p. li.—Less. Traité d'Orn., p. 345.

Piping Roller, Lath. Gen. Hist., vol. iii. p. 86. no. 23.

Cracticus Tibicen, Vig. and Horsf. in Linn. Trans., vol. xv. p. 260.—Gould, Syn. Birds of Australia, Part I.

Gymnorhina Tibicen, G. R. Gray, List of Gen. of Birds, 2nd edit. p. 50.

Ca-ruck, Aborigines of New South Wales.

THIS species is universally diffused over the colony of New South Wales, to which part of the Australian continent I believe its habitat to be confined. It is true that a bird of this genus inhabits the neighbourhood of Swan River, whose size and style of plumage is very similar, but which I have little doubt will prove to be distinct. In fact, from what we see in other instances, it is natural to expect that there would be a species of this genus on the western as well as on the eastern side of the country, and that they would, as representatives of each other, be very nearly allied; I shall therefore consider the habitat of the present bird to be restricted to New South Wales until I have further proofs to the contrary.

The *Gymnorhina Tibicen* is a bold and showy bird, which, when not harassed and driven away, greatly enlivens and ornaments the lawns and gardens of the colonists by its presence, and with the slightest protection from molestation becomes so tame and familiar that it approaches close to their dwellings, and perches round them and the stock yards in small families of from six to ten in number. Nor is its morning carol less amusing and attractive than its pied and strongly contrasted plumage is pleasing to the eye. To describe the notes of this bird is beyond the power of my pen, and it is a source of regret to myself that my readers cannot, as I have done, listen to them in their native wilds, or that the bird is not introduced into this country in sufficient numbers for it to become generally known; a more amusing and easily-kept denizen for the aviary could not be selected. As it dwells in New South Wales all the year round, breeds upon the trees bordering the cleared lands, and constructs a nest as large and conspicuous as that of the Crow of our own island, there can be no difficulty in procuring as many young ones as might be desired; and I trust, therefore, that whenever opportunities occur for sending living examples to England they will not be neglected.

Cleared lands, open flats and plains skirted by belts of trees are its favourite localities, hence the interior of the country is more favourable to its habits than the neighbourhood of the coast.

It lives almost entirely on insects, which are generally procured on the ground, and the number of locusts and grasshoppers it devours is immense. In captivity it subsists upon animal food of almost every kind, and that berries and fruits would be equally acceptable I have but little doubt.

The breeding-season commences in August and lasts until January, during which period two broods are generally reared by each pair of birds. The nest is round, deep and open, composed outwardly of sticks, leaves, wool, &c., and lined with any finer materials that may be at hand. The eggs are either three or four in number; their colour and size I regret to say I cannot give, having unfortunately neglected to procure them while in New South Wales. Of two other and much rarer species I possess the eggs; and although I might from analogy proceed to describe those of the present bird from them, I refrain from so doing.

The young assume the plumage of the adult from the nest, and no change takes place from age or season.

Crown of the head, cheeks, throat, back, all the under surface, scapularies, secondaries, primaries and tips of the tail-feathers black; wing-coverts, nape of the neck, upper and under tail-coverts, and base of the tail-feathers white; bill bluish ash-colour at the base, passing into black at the tip; irides rich reddish hazel; legs black.

The Plate represents the male and female, with the nest, rather less than the natural size.



CYMNORHINA LEUCODONTA: Gould.

GYMNORHINA LEUCONOTA, *Gould.*

White-backed Crow-Shrike.

Barita Tibicen, Quoy et Gaim. Voy. de la Coq., pl. 20.—Less. Traité d'Orn., p. 345.

Goõre-bat, Aborigines of the lowland districts of Western Australia.

THIS fine species of *Gymnorhina*, which has been confounded by the French writers with the *G. Tibicen*, inhabits South Australia, and extends its range as far to the eastward as the colony of New South Wales. I hear that it is tolerably abundant at Port Philip, and that it is sometimes seen on the plains near Yass. For my own part I have never met with it in New South Wales, but observed it to be rather abundant in South Australia. In the extreme shyness of its disposition it presents a remarkable contrast to the *G. Tibicen*; it was indeed so wary and so difficult to approach, that it required the utmost ingenuity to obtain a sufficient number of specimens necessary for my purpose. Plain and open hilly parts of the country are the localities it prefers, where it dwells much on the ground, feeding upon locusts and other insects. In size it is fully as large as any species of the genus yet discovered; it runs over the ground with great facility, and the long flights it frequently takes across the plains from one belt of trees to another, indicated greater powers of flight than is possessed by its near allies; in other parts of its economy it so nearly resembles the *G. Tibicen*, that it would be useless to repeat a description of them here. The same single note and early carol of small companies perched on some leafless branch of a *Eucalyptus* appears characteristic of all the members of the genus.

It breeds in September and October, constructing a nest of dried sticks in an upright fork of a gum- or mahogany-tree. The eggs are three in number, very long in form, and of a dull bluish white, in some instances tinged with red, marked with large bold blotches or zigzag streakings of brownish red or light chestnut; the average length of the eggs is one inch and eight lines, and breadth one inch and one line. Occasionally eggs are met with which are spotted with black or umber-brown.

The sexes when fully adult present no other outward difference than the larger size of the female. Immature birds of both sexes have the whole of the back clouded with grey, and the bill of a less pure ash-colour.

Back of the neck, back, upper and under coverts of the wings, basal portion of the spurious wing, upper and under tail-coverts, and base of the tail-feathers white; remainder of the plumage and the shafts of the white portion of the tail-feathers glossy black; irides light hazel; bill bluish lilac-purple, passing into black at the tip; legs and feet blackish grey.

The Plate represents the two sexes rather less than the size of life.



LYMNORHINA ORGanicum: *Gould.*

GYMNORHINA ORGANICUM, *Gould.*

Tasmanian Crow-Shrike.

Cracticus hypoleucus, Gould in Proc. of Zool. Soc., Part IV. p. 106 ; and in Syn. Birds of Australia, Part I.
Organ-Bird and *White Magpie* of the Colonists.

THIS animated and elegant bird is a native of Van Diemen's Land, and appears to be very local in its habitat, for while it is never found below Austin's Ferry on the southern bank of the river Derwent, it is very plentiful on the opposite side and in the interior of the country, particularly on the salt-pan plains, which would be dreary indeed were they not enlivened by the presence of this amusing bird, the Miners (*Myzanthæ*), and the Rose Hill Parrakeet. It is also to be met with in all the open parts of the country, in small troops of from six to twelve or more in number ; but I did not observe it on the banks of the Tamar, and it certainly does not inhabit Flinders' Island. It runs, and occasionally hops, over the surface with great quickness, but flies rather slowly, and upon alighting on a branch raises and closes one wing several times in quick succession, and in a very peculiar manner. When on the plains it utters a loud ringing call, but when perched on the dead branches of the trees soon after day-break, it pours forth a succession of notes of the strangest description that can be imagined, much resembling the sounds of a hand-organ out of tune, which has obtained for it the colonial name of the Organ-Bird. It is very easily tamed ; and as it possesses the power of imitation in an extraordinary degree, it may be readily taught to whistle various tunes as well as to articulate words ; it consequently soon becomes a most amusing as well as ornamental bird for the aviary or cage. The stomach is very muscular, and the food consists of insects of various kinds, grubs, caterpillars, &c., which are procured on the ground.

A nest I found was placed among the topmost branches of a high gum-tree, was round, cup-shaped, and outwardly constructed of sticks interspersed with strips of bark, short grasses, and tufts of a species of swamp grass, to which succeeded an internal lining of coarse grass, which again was lined with the inner bark of the stringy bark-tree, sheep's wool and a few feathers, felted together and forming a dense and warm receptacle for the eggs ; it was about ten inches in diameter, and about four or five inches in depth.

The eggs were four in number, of a lengthened form with a ground-colour of greenish ashy grey, spotted and blotched, particularly at the larger end, with umber-brown and bluish grey, the latter colour appearing as if beneath the surface of the shell ; they were one inch and five lines long by one inch broad. The young assume the adult livery from the nest, and appear to keep in company of the parent birds during the first ten months of their existence.

The male has the crown of the head, cheeks, throat, all the under surface, scapularies, primaries and tips of the tail jet-black ; nape of the neck, back, upper and under tail-coverts, and base of the tail-feathers white ; bill dark lead-colour at the base, passing into black at the tip ; legs black ; irides bright hazel.

The female differs in having the nape of the neck and back grey, and the primaries and tips of the tail-feathers brownish black.

The Plate represents the two sexes of the natural size.



CRACTICUS NIGROGULARIS: Gould.

J. Gould and H. C. Richter del et lith.

Hallmandel & Walton imp.

CRATICUS NIGROGULARIS, *Gould.*

Black-throated Crow-Shrike.

Vanga nigrogularis, Gould in Proc. of Zool. Soc., Part V.; and in Syn. Birds of Australia, Part I.

Cracticus varius, Vig. and Horsf. in Linn. Trans., vol. xv. p. 261.

THE Black-throated Crow-Shrike finds a natural asylum in New South Wales, the only one of the Australian colonies in which it has yet been found, and where it is by no means rare, although the situations it affects render it somewhat local; it is a stationary species, breeding in all parts of the country suitable to its habits and mode of life; districts of rich land known as apple-tree flats, and low open undulating hills studded with large trees, are the kind of districts to which it peculiarly resorts: hence the cow-pastures at Camden, the fine park-like estate of Charles Throsby, Esq., at Bong-bong, and the entire district of the Upper Hunter, are among the localities in which it may always be found.

It is usually seen in pairs, and from its active habits and conspicuous pied plumage, forms a rather striking object among the trees, the lower and outspreading branches of which are much more frequented by it than the higher ones; from these lower branches it often descends to the ground in search of insects and small lizards, which however form but a portion of its food, for as its powerful and strongly-hooked bill would lead us to infer, prey of a more formidable kind is often resorted to; its sanguinary disposition, in fact, leads it to feed on young birds, mice, and other small quadrupeds, which it soon kills, tears piecemeal and devours on the spot; wounded individuals on being handled inflict severe blows and lacerations on the hands of the captor, unless great care be taken to avoid them.

The nest, which is rather large and round, is very similar to that of the European Jay; those I examined were outwardly composed of sticks, neatly lined with fine fibrous roots, and generally placed on a low horizontal branch among the thick foliage.

The eggs are dark yellowish brown, spotted and clouded with markings of a darker hue, and in some instances with a few minute spots of black; their medium length is one inch and three lines by eleven lines in breadth.

The breeding-season commences in August, and continues during the four following months.

The sexes are so precisely alike in colouring, that although on comparison the female is found to be rather less than the male in all her admeasurements, they can only be distinguished with certainty by dissection.

Head, neck and chest black; hinder part of the neck, shoulders, centre of the wing, rump and under surface white; two middle tail-feathers entirely black, the remainder black largely tipped with white; bill lead-colour at the base, black at the tip; legs black; irides brown.

The young during the first autumn are very different from the adult, particularly in the colouring of the head and chest, which is light brown instead of black; the bill, as in most youthful birds, is also very different, the basal portion being dark fleshy brown instead of lead-colour.

The Plate represents a male and female of the natural size.



CRACTUS PICATUS: Gould.

CRACTICUS PICATUS.

Pied Crow Shrike.

Cracticus picatus, Gould in Proc. of Zool. Soc., February 22, 1848.

Ka-ra-a-ra, Aborigines of Port Essington.

Magpie, of the Colonists.

THIS is in every respect a miniature representative of the *Cracticus nigrogularis* of New South Wales ; it must, however, be regarded as a distinct species ; its much more diminutive size will warrant such a conclusion from every ornithologist who compares them.

It was found at Port Essington by Mr. Gilbert, where it exists in considerable abundance. He states that it is an extremely shy and wary bird, inhabiting the most secluded parts of the forest, and is as frequently seen searching for its food on the ground as among the topmost branches of the highest trees. In its habits, manners, mode of flight, and in its loud, discordant, organ-pipe-like voice, it closely resembles the other members of the genus. It is usually seen in pairs, or in small families of four or five. Its nest is built of sticks in the upright fork of a thickly-foliaged tree, at about thirty or forty feet from the ground.

The stomach is muscular, and the food consists of insects of various kinds, but principally of coleoptera.

The sexes are not to be distinguished by any markings in the plumage, but the young are dressed in a brown colouring like those of the other members of the genus.

Collar at the back of the neck, centre and edge of the wing, rump, abdomen, under tail-coverts and tips of all but the centre tail-feathers white, remainder of the plumage deep black ; irides dark reddish brown ; bill ash-grey, the tip black ; legs and feet dark greenish grey.

The Plate represents the two sexes of the natural size.



CRATICUS ARGENTATUS; Gould

CRACTICUS ARGENTEUS, *Gould.*

Silvery-backed Butcher-Bird.

Cracticus argenteus, Gould in Proc. of Zool. Soc., Part VIII. p. 126.

EXAMPLES of this new species were discovered on the north coast of Australia, both by Captain Grey and B. Bynoe, Esq., to the latter of whom I am indebted for one of the specimens from which my figures were taken.

The *Cracticus argenteus* is directly intermediate in size between *Cracticus destructor* and *Cracticus nigrogularis*, and moreover exhibits a remarkable participation in the colouring of those two species ; having the white throat and chest of the former, and the parti-coloured wings, conspicuous white rump, and white-tipped tail of the latter ; it differs, however, from both, as well as from all the other members of the genus, in the light or silvery grey colouring of the back, and hence the term of *argenteus* has been applied to it.

No account of its habits has yet been received, but they doubtless resemble those of the other species of the genus.

Crown of the head, ear-coverts, shoulders, primaries, and all the tail-feathers for three-fourths of their length from the base, black ; back silvery grey ; throat, all the under surface, sides of the neck, some of the wing-coverts and the margins of several of the secondaries, rump, and tips of the tail-feathers pure white ; bill horn-colour ; feet blackish brown.

The figures are of the natural size.



CRACTICUS DESTRUTTOR.

CRATICUS DESTRUCTOR.

Butcher Bird.

Vanga destructor, Temm. Man., Part I. p. lix.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 213.—Gould in Syn. Birds of Australia, Part I.

Barita destructor, Temm. Pl. Col. 273.

Wād-do-wād-ong, Aborigines of the lowland districts of Western Australia.

Butcher Bird, of the Colonists of Swan River.

THIS bird is a permanent resident in New South Wales and South Australia, where it inhabits the margins of the brushy lands near the coast, the sides of hills, and the belts of trees which occur in the more open parts of the country; in fact I scarcely know of any Australian bird so generally dispersed. Its presence is at all times betrayed by its extraordinary note, a jumble of discordant sounds impossible to be described. It is nearly always on the trees, where it sits motionless on some dead or exposed branch whence it can survey all around, and particularly the surface of the ground beneath, to which it makes perpendicular descents to secure any large insect or lizard that may attract its sharp and penetrating eye; it usually returns to the same branch to devour what it has captured, but at times will resort to other trees and impale its victim after the manner of the true Shrikes: mice, small birds, and large *Phasmidæ* come within the list of its ordinary diet. September and the three following months constitute the period of incubation. The nest, which is large and cup-shaped, is neatly formed of sticks, and in some instances beautifully lined with the shoots of the *Casuarina* and fibrous roots. Considerable difference is found to exist in the colour of the eggs, the ground colouring of some being dark yellowish brown, with obscure blotches and marks of a darker hue, and here and there a few black marks not unlike small blots of ink; while in others the ground colour is much lighter and the darker markings are more inclined to red, and to form a zone round the larger end; the eggs are generally three in number, one inch and three lines long by eleven lines broad.

Under ordinary circumstances this species is very shy and retiring, but at times is altogether as bold; as an evidence of which I may mention, that having caught a young *Eöpsaltria* and placed it in my pocket, the cries of the little captive attracted the attention of one of these birds, which continued to follow me through the woods for more than an hour, when the little tenant, disliking its close quarters, effected its escape and flitted away before me: I immediately gave chase; but the Butcher-bird, who had been following me, pounced down within two yards of my face and bore off the poor bird to a neighbouring tree, and although I ran to the rescue, it was of no avail, the prize being borne away from tree to tree until the tyrant paid the forfeit of his life by being shot for his temerity.

The sexes are so similar in appearance, that it is impossible to distinguish one from the other by any other means than dissection.

The male has the crown of the head, ear-coverts and back of the neck black; a white mark from the base of the bill to the eye; back and rump dark greyish brown; upper tail-coverts white; wings blackish brown; the middle secondaries white along their outer edges; tail black, all the feathers except the two middle ones tipped with white on their inner webs; under surface greyish white; bill bluish lead-colour at the base, passing into black at the tip; feet blackish lead-colour; irides very dark reddish brown.

The female resembles the male, but is more obscure in all her markings; and the young differ in being clothed in a plumage of mottled tawny and brown.

The figures represent the two sexes of the natural size.



CRACTICUS QUOYII.

J. Gould and H.C. Richter del et lith.

Hallman and W. W. Brown imp.

CRACTICUS QUOYII.

Quoy's Crow Shrike.

Barita Quoyi, Less. Zool. de la Coq., tom. i. p. 639. pl. 24.—Ib. Traité d'Orn., p. 345.

Mol-göl-ga, Aborigines of Port Essington.

WE have abundant evidence that New Guinea and the continent of Australia belong to one and the same group of islands, and that both countries are adorned with similar forms of botany and zoology. In some instances the same species are found to inhabit both countries, and of this fact the present bird is an example. M. Temminck, to whom I showed specimens killed in Australia, assured me that they were identical with those from New Guinea. The northern coast is the only portion of Australia in which this bird has been observed. It is tolerably abundant at Port Essington, where it inhabits the mangrove swamps generally, even those close to the settlement.

Mr. Gilbert states that it is one of the most shy and wary birds that can well be imagined; and that the nature of its usual haunts precludes in a great measure all chance of getting a sight of it. He has never met with it in any other situation than the darkest and thickest parts of the mangroves, where there is a great depth of mud, and where the roots of the trees are very thickly intertwined; it is among these roots that it is constantly seen searching for crabs. Its note is short and monotonous, and very like the name given to it by the aborigines, *Mol-göl-ga*, the second syllable being prolonged and forming the highest note; it also utters other sounds, some of them resembling those of the *Cracticus leuconotus*; at other times it frequently emits a note very similar to the cry of young birds for food.

The stomach is muscular, and the food consists of crabs, and occasionally of coleoptera, neuroptera, and the larvæ of insects of various kinds.

The entire plumage black, each feather of the upper and under surface broadly margined with deep glossy green; irides dark reddish brown; bill very light ash-grey, passing into leaden grey at the base, and dark bluish grey on the culmen near the tip; legs and feet greenish grey.

The bill appears to vary very much in colour; being in some instances entirely ash-grey, except at the tip, where it is black; while in others the basal two-thirds is black and the tip grey: whether this difference is occasioned by age or sex has not yet been ascertained.

The figure represents a male of the natural size.



GRALLINA AUSTRALIS..

GRALLINA AUSTRALIS, G. R. Gray.

Pied Grallina.

Gracula picata, Lath. Ind. Orn. Supp., p. 29.

Pied Grakle, Lath. Gen. Syn. Supp., vol. ii. p. 130.—Ib. Gen. Hist., vol. iii. p. 169.

Tanypus Australis, Oppel.

Grallina melanoleuca, Vieill. Anal. d'une Nouv. Orn., pp. 42 and 68.—Ib. Gal. des Ois., pl. 150.—Ib. 2nde Edit. du Dict. d'Hist. Nat., tom. xiii. p. 41. pl. F. 32.—Ib. Ency. Méth. Orn., Part II. p. 693.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 233.

Grallina bicolor, Vig. and Horsf. in Linn. Trans., vol. xv. p. 233.

Grallina Australis, G. R. Gray, List of Gen. of Birds, 2nd Edit. p. 33.

Grallina picata, Strickl. in Mag. Nat. Hist., vol. ii. p. 335.

Corvus cyanoleucos, Lath. Gen. Hist. vol. iii. p. 49?

Magpie Lark, Colonists of New South Wales.

Little Magpie, Colonists of Swan River.

Bý-yoo-gool-ye-de, Aborigines of the lowland, and

Dil-a-but, Aborigines of the mountain districts of Western Australia.

FUTURE research will, in all probability, establish the fact of this bird being universally dispersed over the greater portion of Australia; I have specimens in my collection from New South Wales, Swan River, and Port Essington, all of which are so closely alike that no character of sufficient importance to establish a second species can be detected. Those that came under my observation in New South Wales were never seen very near the coast, but frequented the rich alluvial flats and sides of the creeks and rivulets of the interior.

Few of the Australian birds are more attractive than the present, or more elegant and graceful in its actions, and these, combined with its tame and familiar disposition, must ever obtain for it the friendship and protection of the settlers, whose verandahs and house-tops it constantly visits, running along the latter like the Pied Wagtail of our own island; in fact, the two birds, except in size, are very similar. Mr. Gilbert states that in Western Australia he observed it congregated in large families on the banks and muddy flats of the lakes around Perth, while in the interior he only met with it in pairs, or at most in small groups of not more than four or five together; he further observes, that at Port Essington, on the north coast, it would seem to be only an occasional visitant, for on his arrival there in July it was tolerably abundant round the lakes and swamps, but from the setting-in of the rainy season in November to his leaving that part of the country in the following March not an individual was to be seen; it is evident therefore that the bird removes from one locality to another according to the season and the more or less abundance of its peculiar food. I believe it feeds solely upon insects of various kinds, particularly aquatic grubs, grasshoppers, and coleoptera generally.

The flight of the *Grallina* is very peculiar, and unlike that of any other Australian bird that has come under my notice; it much resembles that of the Common Pewit of Europe, and is performed with the same heavy flapping motion of the wings; still the flight of the two birds differs materially during their passage through the air, the *Grallina* passing noiselessly and generally in a straight line, while the Pewit makes sudden turns and dips,—a peculiarity in its mode of flight which must have been noticed by all who have seen the bird on the wing.

Its natural note is a peculiarly shrill whining whistle often repeated.

The nest may be regarded as one of the anomalies of Australia, so unlike is it to anything usually met with; it is from five to six inches in breadth and three in depth, and is formed of soft mud, which soon becoming hard and solid upon exposure to the atmosphere has precisely the appearance of a massive clay-coloured earthenware vessel; as if to attract notice, this singular structure is generally placed on some bare horizontal branch, often on the one most exposed to view, sometimes overhanging water and at others in the open forest. The colour of the nest varies with that of the material of which it is formed: sometimes the clay or mud is sufficiently tenacious to be used without any other material, but in those situations where no mud or clay is to be obtained it is constructed of black or brown mould; the bird, appearing to be aware that this substance will not hold together for want of the adhesive quality of the clay, mixes with it a great quantity of dried grass, stalks, &c., and thus forms a firm and hard exterior, the inside of which is slightly lined with dried grasses and a few feathers. The eggs differ considerably in colour and in shape, some being

extremely lengthened, while others bear a relative proportion ; the ground-colour of some is a beautiful pearl-white, of others a slight tinge of buff ; their markings again differ considerably in form and in their disposition, being in some instances wholly confined to the larger end, in others distributed over the whole of the surface, but always inclined to form a zone at the larger end ; in some these markings are of a deep chestnut-red, in others light red with large clouded spots of grey appearing as if beneath the surface of the shell. The eggs are generally four, but sometimes are only two in number ; their medium length is one inch and three lines, and their breadth nine lines. It breeds in October and November.

Although the sexes are very similar in size, the female may at all times be distinguished from the male by her white forehead and throat, a fact I determined many times by actual dissection, thus showing the fallacy of the opinion entertained by some naturalists of their being two distinct species.

The male has a line over the eye, a patch on each side of the neck, a longitudinal stripe on the wing, tips of the secondaries, rump, upper tail-coverts, the basal two-thirds and the tips of the tail, under surface of the shoulder, breast, flanks, abdomen and under tail-coverts white, the remainder of the plumage black with a deep bluish tinge on the head, throat, chest and back, and a green tinge on the primaries and tail ; bill yellowish white ; irides straw-yellow ; feet black.

The female differs in having the forehead, lores and chin white. The young on leaving the nest have the irides black ; in other respects they resemble their parents, but are of course far less brilliant in colour.

The figures represent the two sexes of the natural size.



GRAY'S MELANOPS.

J. Gould del. W. B. Fisher del. et lith.

Hallman del. & Walton. Eng.

GRAUCALUS MELANOPS.

Black-faced Graucalus.

Corvus melanops, Lath. Ind. Orn. Supp., p. xxiv. no. 1.

Ceblepyris melanops, Temm. Man., p. lxii.

Rollier à masque noir, Le Vaill. Ois. de Parad., pl. 30.

Black-faced Crow, Lath. Gen. Syn. Supp., vol. ii. p. 116.—Ib. Gen. Hist., vol. iii. p. 46.

Graucalus melanops, Vig. and Horsf. in Linn. Trans., vol. xv. p. 216.—Gould in Syn. Birds of Australia, Part IV.

Kai-a-lora, Aborigines of New South Wales.

Nu-lär-go, Aborigines of the lowland, and

Nü-laarg, Aborigines of the mountain districts of Western Australia.

Blue Pigeon of the Colonists.

NEW SOUTH WALES, Van Diemen's Land, Swan River and Port Essington are each inhabited by *Graucali* so nearly allied to the present bird, that by many persons it would be considered questionable whether they were not referable to one and the same species; but as this is by no means certain, I shall confine my remarks to the bird inhabiting New South Wales, which is one of the largest of the genus yet discovered, and distinguished from its near allies by the greater depth of the blue-grey colouring of the upper surface.

The *Graucalus melanops*, then, is a very common bird in New South Wales, but is far less numerous in winter than in summer, when it is so generally dispersed over the colony, that to particularize situations in which it may be found is quite unnecessary; hills of moderate elevation, flats and plains thinly covered with large trees being alike resorted to; but I do not recollect encountering it in the midst of the thick brushes,—situations which, probably, are uncongenial to its habits and mode of life. On the plains of the interior, such as the Liverpool and those which stretch away to the northward and eastward of New South Wales, it is more abundant than within the colony.

Its flight is undulating and powerful, but is seldom exerted for any other purpose than that of conveying it from one part of the forest to another, or to sally forth in pursuit of an insect which may pass within range of its vision while perched upon some dead branch of a high tree, a habit common to this bird and the other members of the genus. On this elevated perch it sometimes remains for hours together; but during the heat of the day seeks shelter from the rays of the sun by shrouding itself amidst the dense foliage of the trees. Its food consists of insects and their larvæ, and berries, but the former appear to be preferred, all kinds being acceptable, from the large Mantis figured in the accompanying Plate, to others of a minute size. One of the specimens I procured was shot while in the act of flying off with the insect figured.

As much diversity occurs in the colouring of the face and throat of this species before it arrives at maturity, I made a point of minutely investigating the subject during my stay in New South Wales, and the following is the result of my observations. When the young, which are generally two in number, leave the nest, the feathers of the body are brown, margined with light grey; this colouring is soon exchanged for one of a uniform grey, except on the lower part of the abdomen and under tail-coverts, which are white, and a mark of black which surrounds the eye and spreads over the ears: the throat and forehead in this stage are lighter than the remainder of the plumage, which is somewhat singular, as in the next change that takes place those parts become of a jet-black; and this colour, I believe, is never afterwards thrown off, but remains a characteristic of the adult state of both sexes, which are at all times so similar in size and colour as not to be distinguished from each other.

It breeds in October and the three following months. The nest is often of a triangular form, in consequence of its being made to fit the angle of the fork of the horizontal branch in which it is placed; it is entirely composed of small dead twigs, firmly matted together with a very fine, white, downy substance like cobwebs and a species of *Lichen*, giving the nest the same appearance as the branch upon which it is placed, and rendering it most difficult of detection. In some instances I have found the nest ornamented with the broad, white, mouse-eared Lichen; it is extremely shallow in form, its depth and breadth depending entirely upon that of the fork in which it is built; the largest I have seen did not exceed six inches in diameter.

The ground-colour of the eggs, which are almost invariably two in number, varies from wood-brown to asparagus-green, the blotches and spots, which are very generally dispersed over their surface, varying from dull chestnut-brown to light yellowish brown; in some instances they are also sparingly dotted with deep umber-brown; their medium length is thirteen lines, and breadth ten lines.

Its note, which is seldom uttered, is a peculiar single purring or jarring sound, repeated several times in succession.

The adults have the forehead, sides of the face, ear-coverts and throat jet-black; crown of the head, all the upper surface and wing-coverts delicate grey; primaries black, their outer edges and tips margined with grey; secondaries grey, with their inner webs black; tail grey at the base, gradually passing into black near the extremity, and broadly tipped with white; chest blackish grey, into which the black of the throat gradually passes; lower part of the abdomen pale grey; under tail-coverts white; irides, bill and feet black.

The Plate represents an adult male and a young bird of the first year of the natural size.



CRATICHEUMON MENTALIS: Vig. & Horsf.

GRAUCALUS MENTALIS, *Vig. and Horsf.*

Varied Graucalus.

Graucalus mentalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 217.

Lanius robustus, Lath. Ind. Orn. Supp., p. xviii. ?—Shaw, Gen. Zool., vol. viii. p. 311 ?

Robust Shrike, Lath. Gen. Syn. Supp., vol. ii. p. 74 ?—Ib. Gen. Hist., vol. ii. p. 67 ?

NEW SOUTH WALES, or the south-eastern division of Australia, is the native habitat of the present species ; it is by no means a rare bird in the Upper Hunter and all similar districts, yet I did not succeed in finding its nest and eggs ; they are therefore desiderata with me.

There is no one member of the family to which it belongs which undergoes so many changes of plumage as the present species, and it is consequently very puzzling to the ornithologist. In extreme youth, or during the first few months after it has left the nest, the throat, chest and back of the neck is jet-black, while the breast and abdomen are rayed with obscure arrow-shaped markings of the same colour on a greyish white ground ; from this state individuals in every variety of change, to the uniform grey throat and head, with black lores and mark under the eye, are to be met with. Independently of a difference in its markings, its much smaller size will at all times serve to distinguish it from *Graucalus melanops*, which inhabits the same districts. Insects of various orders and caterpillars, which are either captured on the wing or taken from the branches, form its diet.

In the adult the upper surface and wings are dark slate-grey, passing into paler grey on the forehead and on the rump and upper tail-coverts ; primaries and secondaries slaty black, narrowly edged with greyish white ; outer webs of the three secondaries nearest the body grey ; tail black, the lateral feathers largely tipped with white ; lores deep velvety black, which colour is continued above and below the eye ; throat and breast grey ; insertion of the wing, under surface of the wing, abdomen and under tail-coverts white ; bill black ; irides and feet dark brown.

In the accompanying Plate I have figured the extremes of colouring assumed by the bird ; the darkest-coloured being the young of the year.



TRAUCALUS HYPOLEUCUS Gould

J. Gould and H. C. Richter del et lith.

Hallman del & Walton 1891

GRAUCALUS HYPOLEUCUS, *Gould.*

White-bellied Graucalus.

Graucalus hypoleucus, Gould in Proc. of Zool. Soc., February 8, 1848.

THIS species inhabits the neighbourhood of Port Essington, where it is a very familiar bird, constantly flitting about the branches overhanging the houses of the settlement. In its general habits, manners and note it closely assimilates to the *Graucalus melanops*. It is abundant in every part of the Cobourg Peninsula, and is generally seen in small families of from four to ten or twelve in number.

The whiteness of the under surface serves to distinguish this from all the other species of the genus yet discovered in Australia.

The stomach is muscular, and the food consists of insects of various genera, which are generally taken from off the leafy branches of the highest trees.

The sexes assimilate very closely in colouring, and only differ in the females and young males having the lores of a dull brown instead of black.

Lores black ; crown of the head and all the upper surface dark grey ; wings and tail black ; chin, under surface of the wings, abdomen and under tail-coverts white ; breast pale greyish white ; irides brownish black ; bill blackish brown ; legs and feet black ; insides of the feet and spaces between the scales of the tarsi mealy grey.

The figures are of the natural size.



GRACKLE'S SWAINSONII: Gould.

J. Gould and H. C. Richter del. et lith.

Hallman and Walton, Imp.

GRAUCALUS SWAINSONII.

Swainson's Graucalus.

Ceblepyris lineatus, Swains. in Zool. Journ., vol. i. p. 466.

Graucalus Swainsonii, Gould in Syn. Birds of Australia, Part IV.

THIS species of *Graucalus*, which is distinguished from all the other Australian members of the genus by the beautiful barring of the breast, was originally described by Mr. Swainson under the appellation of *lineatus*; but that term having been previously applied to another species of the group, it became necessary to change it; and in substituting that of *Swainsonii*, I was desirous of paying a just tribute to the talents of a gentleman who has laboured most zealously in the cause of natural science, and whose researches and writings are so well known to all ornithologists.

Examples of this species occur in almost every collection sent from Moreton Bay; I regret to add that it is one of the few birds I had no opportunities of observing in a state of nature, and that nothing is at present known of its habits and economy. Judging from the specimens I have examined, I believe that the sexes are alike in plumage.

Lores black; head, all the upper surface, wing-coverts, throat and breast grey; primaries and secondaries black; the former narrowly, and the latter broadly margined on their external edges with grey; tail grey at the base, black for the remainder of its length; abdomen, under surface of the shoulder, and under tail-coverts white, crossed by numerous decided narrow bars of black; bill and feet black.

The figures are of the natural size.



PTEROPODOCYS PHASIANELLUS; Gould.

PTEROPODOCYS PHASIANELLA.

Ground Graucalus.

Graucalus Phasianellus, Gould in Proc. of Zool. Soc., Part VIII. p. 142.

Ceblepyris maxima, Rupp. Mon. in Mus. Senckenbergianum, 1839, p. 28. taf. iii.

Goo-rā-ling, Aborigines of York, Western Australia.

THE rarity of this species in our collections is sufficient evidence that it is a bird inhabiting the interior of the country, and that its native localities have been seldom visited by the explorer; hence it was a source of no ordinary gratification to me when I first encountered it on the plains bordering the River Namoi in New South Wales, and perceived that no very lengthened study of its habits and mode of life was requisite to ascertain that its structure is as beautifully adapted for terrestrial progression and for a residence on the ground, as the structure of the other *Graucali* fits them to inhabit the branches of the trees; more beautiful modifications of form in fact can scarcely be seen than occur among the members of this group, which now comprehends a considerable number of species; the present bird, however, is the only terrestrial one that has yet come under my notice, either from Australia or the great nursery of these birds—India and the Indian islands. The lengthened form of the tarsi and tail and the narrow form of the bill are the most striking of the structural differences between *Pteropodocys* and *Graucalus*, and are so apparent that they must be perceptible at a single glance to all who will examine them. Plains and open glades skirted by belts of high trees are the localities in which I generally met with this bird either in pairs or small parties of four or five; in the latter case they were probably the brood of the year, as they usually consisted of both immature and adult birds.

Its powers of progression on the ground are considerable, and are only equalled by those of flight; when disturbed it flies across the plain to the belts of lofty trees, among the branches of which it appears to be quite as much at ease as upon the ground. During flight the white mark on the rump is very conspicuous, and may be seen at a considerable distance.

The food consists of insects and seeds of various kinds.

That its range extends over the whole of the interior of Australia is more than probable, as I have lately received a specimen from Swan River, in which part of the country it doubtless inhabits localities similar to those it frequents on the east coast.

Of its nidification I regret to say nothing is at present known.

The sexes, which exhibit no external differences, may be thus described:—

Head, neck, chest and back delicate grey, becoming darker on the ear-coverts; rump and abdomen white, crossed by narrow irregular bars of black; under tail-coverts white; wings and tail black, the latter having the tips of the outer and the basal portion of all the feathers white; bill and feet black, tinged with olive; irides buffy white.

The figures are of the natural size.



CAMPEPHAGA JARDINI.

CAMPEPHAGA JARDINII.

Jardine's Campephaga.

Graucalus tenuirostris, Jard. and Selb. Ill. Orn., vol. ii. pl. 114.

Ceblepyris Jardinii, Rüpp. Mon. in Orn. Misc. 1839, p. 30.

THE only parts of Australia wherein this species has been observed are Moreton Bay and the Liverpool Range in New South Wales, and the neighbourhood of Port Essington in the Cobourg Peninsula on the north coast: it is likely that it ranges over the whole of the intermediate country, but this can only be determined by future research. The great difference in the colouring of the sexes, its smaller size and more attenuated bill, point out most clearly that it is a member of the genus *Campephaga*, and not of *Graucalus*, to which it was first assigned. It is far less common in New South Wales than it is at Port Essington, where Mr. Gilbert collected the following notes respecting it:—

“This bird is extremely shy and retiring in its habits. I have never seen it flying about the low shrubs like the other species of the genus, nor at any time near the ground; on the contrary, it always inhabits the topmost branches of the loftiest and most thickly-foliaged trees growing in the immediate vicinity of swamps, or the mangroves. Its note too is altogether different from that of any other species of the genus, being a harsh, grating, buzzing tone, repeated rather rapidly about a dozen times in succession, followed by a lengthened interval. It appears to be a solitary species, as I never saw more than one at a time.”

The stomach is muscular, and the food consists of insects of all kinds, but principally coleoptera.

The adult male has the lores black; all the upper and under surface, wing-coverts, edges of the primaries and secondaries, basal three-fourths of the two central and the tips of the outer tail-feathers deep blue-grey; primaries, secondaries and the other parts of the tail black; irides dark brown; bill blackish brown; legs and feet very dark greenish grey.

The female has the whole of the upper surface, wings and tail brown, the two latter edged with buff; line over the eye and all the under surface buff, the feathers of the side of the neck, the breast and the flanks with an arrow-head-shaped mark of brown in the centre.

The young male is bluish brown above; wings and tail as in the female; under surface buff, crossed with numerous transverse narrow irregular bars of black.

The figures represent an adult and a young male of the natural size.



CAMPEPHAGA KARU.

J. Gould and F. C. Richter del. et lith.

Hollmann, Falcon imp.

CAMPEPHAGA KARU.

Northern Campephaga.

Lanius Karu, Less. Zool. de la Coq., pl. 12.

Notodela Karu, Less. Traité d'Orn., p. 374.

MR. GILBERT, who met with this species at Port Essington on the northern coast of Australia, states that it is a very shy and timid bird, that it is generally seen creeping about in pairs among the thickets and clumps of mangroves, that its note is a somewhat shrill piping call, that its stomach is tolerably muscular, and that it feeds upon insects of various kinds : this, I regret to say, is all that is known respecting it.

In referring this species to the *Lanius Karu* of Lesson, I am rather influenced by a desire not to add to the number of useless synonyms, than from any positive conviction of their being identical ; for although, having only M. Lesson's figure to refer to, I am unable to detect any difference of sufficient importance to be considered specific, little doubt exists in my mind that the two birds are really distinct, and that future research will verify the propriety of this opinion.

The male has the head, all the upper surface, wings and tail black ; the wing-coverts largely tipped, primaries narrowly edged and tipped, secondaries broadly margined on their external webs, rump and upper tail-coverts slightly, the external tail-feather largely, and the next on each side slightly tipped with white ; line from the nostrils over each eye to the occiput buffy white ; under surface pale grey, crossed on the breast and flanks with narrow irregular bars of slaty black, and washed with fulvous, gradually increasing in intensity until on the vent and under tail-coverts it becomes of a deep tawny buff ; irides dark brown ; bill black ; feet blackish grey externally, bluish grey internally ; light mealy ashy grey between the scales and inside the feet.

The female differs in being somewhat smaller than the male ; in having the upper surface and tail brown, instead of black ; the upper tail-coverts tipped with buff instead of white, and the barrings of the under surface broader, darker and more distinct.

The Plate represents the two sexes of the natural size.



CANTREPIA LEUCOMELA: Vig. & Horsf.

CAMPEPHAGA LEUCOMELA, *Vig. and Horsf.*

Black and White Campephaga.

Campephaga leucomela, Vig. and Horsf. in Linn. Trans., vol. xv. p. 215.

THIS species, which frequents the brushes of the eastern parts of New South Wales between the river Hunter and Moreton Bay, differs from the *Campephaga Karu* in its much greater size, in the rufous colouring of the lower part of the abdomen and under tail-coverts, in the more uniform grey colouring of the breast, and in the barring of this part being much less conspicuous. I have had examples of this species in my collection for many years, but was not fortunate enough to see it alive during my visit to Australia. Mr. Strange has also sent me a pair which he had shot in the scrubs on the banks of the Clarence. Its nest and eggs, and any information of its habits, are desiderata to me.

The sexes, as in the other species, differ considerably from each other; they may be thus described:—

The male has the head, back, wings and tail deep glossy black; wing-coverts largely tipped and the secondaries broadly margined with white; the two outer tail-feathers tipped with white, the external one also narrowly margined on the outer web with the same hue; rump and upper tail-coverts very dark grey; line over the eye snow-white; under surface greyish white, gradually passing into rufous on the abdomen and under tail-coverts, and indistinctly rayed with dark grey; bill, feet and irides black.

The young male is brown where the male is black; has the wings not so conspicuously marked with white; the under surface washed with rufous and conspicuously rayed with brown; and the under tail-coverts deep rufous.

The figures represent an adult male and young male of the natural size.



CAMPEPHAGA HUMERALIS: Gould.

CAMPEPHAGA HUMERALIS, *Gould.*

White-shouldered Campephaga.

Ceblepyris humeralis, Gould in Proc. of Zool. Soc., Part V. p. 143 ; and in Syn. Birds of Australia, Part IV.
Goo'-mul-cul-long, Aborigines of the mountain districts of Western Australia.

THIS bird occurs in considerable numbers throughout the whole of the southern portion of Australia during the months of summer ; it is strictly migratory, arriving in the month of September, when insects are most plentiful, and having performed the task of reproduction departs again northwards in the months of January and February. It is a most animated, lively and spirited bird, constantly singing a loud and pretty song while actively engaged in pursuit of insects, which it either captures on the wing, among the branches or on the ground. It commences breeding soon after its arrival, constructing a shallow round nest of small pieces of bark, short dead twigs and grasses interwoven with fine vegetable fibres, cobwebs, white moss, &c., and sometimes a few grasses and fine fibrous roots by way of lining ; it is usually placed in the fork of a horizontal dead branch of the apple- and gum-trees, and is not easily seen from below. During the early part of the breeding-season the male frequently chases the female from tree to tree, pouring forth his song all the while. The eggs, which are generally two, but sometimes three in number, differ very considerably in colour, some being of a light green blotched all over with wood-brown, while others have a lighter ground so largely blotched with chestnut-brown as nearly to cover the entire surface of the shell, and I have seen some of an almost uniform greyish green ; their medium length is nine and a half lines and breadth seven and a half lines.

The above is a detail of what I myself observed of the bird in New South Wales. In his Notes from Western Australia, Mr. Gilbert says, "This bird is a migratory summer visitant to this part of the country, where it arrives about the beginning of September, after which it is to be met with in considerable numbers among the mountains of the interior, but is very rarely seen in the lowland districts.

"Its powers of flight are considerable, and when excited during the breeding-season the males become very pugnacious, and not only attack each other in the most desperate manner, but also assault much larger birds that may approach the nest. Its usual flight is even, steady and graceful, and while flying from tree to tree it gives utterance to its sweet and agreeable song, which at times is so like the full, swelling, shaking note of the Canary, that it might easily be mistaken for the song of that bird. It is a remarkably shy bird, especially the females, which are so seldom seen that I was at first inclined to think they were much less numerous than the other sex, but this I afterwards found was not the case ; their favourite haunts are thickly-wooded places and the most secluded spots. The nest is so diminutive that it is very difficult to detect it, and so shallow in form that it is quite surprising the eggs do not roll out when the branch is shaken by the wind. I am told that they generally build in the Raspberry-Jam-tree, but the nests I discovered were placed on a horizontal dead branch of a Eucalyptus ; they were formed of grasses and contained two eggs. It breeds in the latter part of September and the beginning of October." Mr. Gilbert subsequently met with the bird at Port Essington, where also it appears to be migratory, for not a single individual was to be seen from the early part of November to the month of March ; females and young birds were very abundant on his arrival in July, but he only met with one old male during his residence in the colony, a period of eight months.

The stomach is muscular, and the food consists of insects of various kinds and their larvæ.

The sexes differ considerably in colour, as will be seen in the accompanying Plate and the following description :—

The male has the forehead, crown of the head, back of the neck and upper part of the back glossy greenish black ; shoulders and upper wing-coverts pure white, forming an oblique line along the wing ; the remainder of the wing dull black, with the secondaries slightly margined and tipped with white ; lower part of the back and rump grey ; tail dull black, the two outer feathers on each side largely tipped with white ; throat, chest and all the under surface white ; bill and feet black ; irides nearly black.

The female has all the upper surface, wings and tail brown ; wing-coverts and secondaries margined with buff ; throat and all the under surface buffy white, with the sides and front of the breast speckled with brown ; irides very dark brown ; upper mandible and tip of the lower dark reddish brown ; basal portion of the latter saffron-yellow ; legs and feet dark greyish black, slightly tinged with lead-colour.

The figures represent the two sexes of the size of life.



PACHYCEPHALA GUTTURALIS.

PACHYCEPHALA GUTTURALIS.

Guttural Pachycephala.

Turdus gutturalis, Lath. Ind. Orn. Supp., p. xlii.

Black-crowned Thrush, Lewin, Birds of New Holl., pl. 10.

Guttural Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 182.—Shaw, Gen. Zool., vol. x. p. 256.—Lath. Gen. Hist., vol. v. p. 136.

Pachycephala gutturalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 239.—G. R. Gray, List of Gen. of Birds, 2nd edit., p. 45.

Turdus lunularis, Shaw.

Laniarius albicollis, Vieill.

Pachycephala fusca, Vig. and Horsf. in Linn. Trans., vol. xv. p. 240.—Gould in Syn. Birds of Australia, Part III.

——— *fuliginosa*, Vig. and Horsf. in Linn. Trans., vol. xv. p. 241, female or young.

Pe-dil-me-dung, Aborigines of Western Australia.

Thunder Bird, Colonists of New South Wales.

It would seem that the whole extent of the southern coast of Australia is inhabited by the present species, for on comparing adult males from New South Wales, South Australia and Swan River, I find that they do not differ in any respect; the apical half of the tail is blackish brown in all, and the colouring of the under surface of the richest yellow. It is rather abundantly dispersed over the forests of *Eucalypti* and the belts of *Acaciæ*, among the flowering branches of which latter tribe of trees the male displays himself to the greatest advantage, and shows off his rich yellow breast as if desirous of outvieing the beautiful blossoms with which he is surrounded.

The stomach is very muscular, and its principal food consists of insects of various genera, which are sought for and captured both among the flowers and leaves as well as on the ground.

It is generally met with in pairs, but the males are more shy than the females. It flies in short and sudden starts, and seldom mounts far above the tops of the trees.

The voice of the male is a single note seven or eight times repeated, and terminating with a sharp higher note much resembling the smack of a whip; that of the female is very different, being a series of running half-notes, forming a rather plaintive tune.

Mr. Gilbert mentions that it is sparingly dispersed throughout the Swan River colony, but is more abundant in the best-watered districts, such as Perth and Fremantle.

I did not succeed in finding the nest of this species, but was informed that it breeds in September and October, and lays three or four eggs, ten and a half lines long by eight lines broad, with a ground-colour of brownish buff, sparingly streaked and spotted with reddish brown and bluish grey, the latter colour appearing as if beneath the surface of the shell.

The male has the crown of the head, lores, line beneath the eye, ear-coverts, and a crescent-shaped mark from the latter across the breast deep black; throat, within the black, white; back of the neck, a narrow line down each side of the chest behind the black crescent, and all the under surface gamboge-yellow; back and upper tail-coverts yellowish olive; wing-coverts blackish brown, margined with yellowish olive; primaries and secondaries blackish brown, margined with greyish olive; basal half of the tail grey, apical half blackish brown tipped with grey; irides dark brown; bill black; legs and feet blackish grey.

The female has the whole of the upper surface and tail greyish brown; primaries and secondaries brown, margined with grey; throat pale brown freckled with white; remainder of the under surface pale brown, passing into deep buff on the abdomen.

The Plate represents the two sexes of the natural size.



PACHYCEPHALA CLAUSTRÆ: Gould.

J. Gould and W. C. Richter del et lith.

Hallman del & Walton Imp.

PACHYCEPHALA GLAUCURA, *Gould.*

Grey-tailed Pachycephala.

Pachycephala glaucura, Gould, in Proc. of Zool. Soc., March 25, 1845.

Pe-dil-me-dung, Aborigines of the lowland districts of Western Australia.

ALTHOUGH the present bird is very nearly allied to the *P. gutturalis*, it may be readily distinguished from that species by its larger size, by its shorter and more robust bill, by the uniform grey colouring of its tail, and by the lighter and more washy tint of the yellow of the under surface. Van Diemen's Land and the islands in Bass's Straits are the only countries in which it has yet been discovered, and where it takes the place of the *P. gutturalis*, which latter species appears to be exclusively confined to the Australian continent.

The *P. glaucura* frequents the vast forests of *Eucalypti* that cover the greater part of Van Diemen's Land, and although it is rather thinly dispersed, is to be met with in every variety of situation, the crowns of the hills and the deep and most secluded gulleys being alike visited by it. It frequently descends to the ground in search of insects, but the leafy branches of the trees, particularly those of a low growth, are the situations to which it gives the preference.

The adult male, like most other birds of attractive plumage, is of a shy disposition; hence there is much more difficulty in obtaining a glimpse of it in the woods, than of the sombre-coloured and comparatively tame female, or even of the young males of the year, which during this period wear a similar kind of livery to that of the latter.

The actions of this species are somewhat peculiar, and unlike those of most other insectivorous birds: it pries about the leafy branches of the trees, and leaps from twig to twig in the most agile manner possible, making all the while a most scrutinizing search for insects, particularly coleoptera. When the male exposes himself, as he occasionally does, on some bare twig, the rich yellow of his plumage, offering a strong contrast to the green of the surrounding foliage, renders him a conspicuous and doubtless highly attractive object to his sombre-coloured mate, who generally accompanies him. Males in colour like those represented on the accompanying Plate seldom associate together, their recluse disposition leading them not only to avoid each other's society, but also that of all other birds. It sometimes resorts to the gardens and shrubberies of the settlers, but much less frequently than might be supposed, when we consider that the neighbouring forests are its natural place of abode.

The voice of the Grey-tailed Pachycephala is a loud whistling call of a single note several times repeated, and by which the presence of the male is often detected when it would otherwise be passed by unnoticed. I was unsuccessful in my search for its nest, and the eggs are still a desideratum to my cabinet. I shot the young in various stages of plumage, and found them to differ so much that a more, than ordinarily minute description is necessary, in order that those who may not have an opportunity of seeing the bird in its native country may not be misled respecting it. Soon after leaving the nest the ground-colour of the entire plumage is grey, washed or stained as it were, both on the upper and under surface, with rusty or chestnut-red; this gradually gives place to a uniform olive-brown above and pale brown beneath, which being precisely the colouring of the adult females, the young birds in this stage and the old females are not to be distinguished from each other.

The adult male has the crown of the head, lores, space beneath the eye and a broad crescent-shaped mark from the latter across the breast deep black; throat, within the black, white; back of the neck, a narrow line down each side of the chest behind the black crescent and the under surface yellow; back and wing-coverts yellowish olive; wings dark slate-colour margined with grey; tail entirely grey; under tail-coverts white, or very slightly washed with yellow; irides reddish brown; bill black; feet dark brown.

The Plate represents two males and a female of the natural size, on one of the common Acacias of Van Diemen's Land.



PACHYCEPHALA MELANURA: *Could.*

PACHYCEPHALA MELANURA, *Gould.*

Black-tailed Pachycephala.

Pachycephala melanura, Gould in Proc. of Zool. Soc., Part X. p. 134.

THE *Pachycephala melanura* is a native of the northern coasts of Australia, where it was procured by B. Bynoe, Esq., during the surveying voyage of H.M.S. the Beagle. It may be readily distinguished from the *P. gutturalis* and *P. glaucura* by the jet-black colouring of the tail, which organ is also shorter and more square than that of any other species, by its much longer bill, and by the colouring of the back of the neck and the under surface being richer than that of either of those above-named. I have not yet seen a female of this fine species, wanting which I have figured two males in different positions.

It may be thus described :—

Head, crescent commencing behind the eye and crossing the chest and the tail black ; throat pure white ; collar round the back and sides of the neck, and all the under surface very rich gamboge-yellow ; upper surface rich yellowish olive ; wings black, the coverts margined with yellowish olive ; the primaries narrowly and the secondaries broadly margined with yellowish grey ; bill and feet black ; irides brown.

The figures are of the natural size.



PACHYCEPHALA PECTORALIS, (Vig & Horsf.)

PACHYCEPHALA PECTORALIS, *Vig. and Horsf.*

Banded Thick-head.

Muscicapa pectoralis, Lath. Ind. Orn. Suppl., p. li.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xxi. p. 455, and Ency. Méth., 2nde Part., p. 830.

Orange-breasted Thrush, Lewin, Birds of New Holland, pl. 8.

Pachycephala pectoralis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 239.—Gould, Syn. Birds of Australia, Part III.

———— *striata*, Vig. and Horsf. in Linn. Trans., vol. xv. p. 240, female or young male?

Lanius macularius, Quoy et Gaim., Voy. de l'Astrolabe, p. 257. pl. 31. f. 1, young male?

Rufous-vented Honey-eater, Lath. Gen. Hist., vol. iv. p. 183.

THIS very common species ranges over the whole of the southern portion of the Australian continent, from Swan River on the west to Moreton Bay on the east; but the extent of its range northwards has not yet been strictly determined. During the spring and the earlier months of summer there are few birds that possess a more animated and lively song, which, moreover, is very different from any bird I recollect having heard, either in Australia or Europe, being a loud continuous ringing whistle, frequently terminating in a sharp smack, this latter note being peculiar to most members of the group. In New South Wales and South Australia it is abundantly dispersed over all the thinly-timbered forests, keeping among the leafy branches of the highest trees. I do not myself recollect having met with it in the brushes, while in Western Australia the thick scrubs are said to be its favourite places of resort.

Although it does not migrate it makes a slight change in the situations it frequents, according to the state of the seasons, or the more or less abundant supply of food, which consists of insects of various kinds, caterpillars and berries: like the other members of the group, it creeps and hops about the branches in a gentle and quiet manner.

The sexes, as will be seen in the accompanying illustration, differ very considerably both in the arrangement of their markings and in the general colouring of their plumage, and it is not until the second year that the young males assume the band on the chest and the pure white throat of the adult. The breeding-season commences in August or September, and continues during the three following months. The nest is cup-shaped, and rather a frail structure, being often so slight that the eggs may be descried through the interstices of the fine twigs and fibrous roots of which it is composed. In New South Wales I found the nest is built upon the small horizontal branches of large trees, but at Swan River it is more frequently constructed in shrubs, particularly the *Melaleuca*: the eggs are generally three in number, of an olive tint, with a zone of indistinct spots and blotches at the larger end; they are eleven lines long by eight lines broad.

The male has the throat white, encircled by a broad band of black, which commences at the base of the bill, surrounds the eye, passes down the sides of the neck, and crosses the breast; forehead and crown dark grey, with a small stripe of black down the centre of each feather; the remainder of the upper surface dark grey; wings and tail blackish brown, each feather margined on the outer web with dark grey; sides of the breast and flanks grey; centre of the breast, abdomen, and under tail-coverts orange-brown; irides reddish hazel; bill black; legs and feet olive-black.

The female has the head and all the upper surface brownish grey; wings and tail dark brown, margined on the exterior webs with brownish grey; throat dull white, gradually passing into the tawny buff which covers the whole of the under surface, each feather of the throat and under surface having a narrow stripe of dark brown down the centre; irides blackish brown; bill flesh-brown; corner of the mouth yellow; feet lead-colour.

The Plate represents a male and a female of the natural size.



PACHYCEPHALA FALCATA: *Coold.*

J. Coold. and H.C. Richter del. et lith.

Hallman del. & Wallen. Imp.

PACHYCEPHALA FALCATA, *Gould.*

Lunated Pachycephala.

Pachycephala falcata, Gould in Proc. of Zool. Soc., Part X. p. 134.

WE find in this species of *Pachycephala*, which inhabits the northern parts of Australia, a beautiful representative of the *P. pectoralis* of the southern parts of the continent; from which it differs in its much smaller size, and in the black crescent which bounds the white throat of the male not extending upwards to the ear-coverts, which with the lores are grey. All the specimens I possess were killed on the Cobourg Peninsula, near the settlement at Port Essington, where, as well as on the adjacent islands, it is a stationary species, and very abundant. It breeds in September and the two following months, and lays two eggs. Its habits and manners are precisely similar to those of the other members of the family.

The adult male has the crown of the head, lores, ear-coverts, back and upper tail-coverts grey; wings dark brown, all the feathers margined with grey; throat white, bounded below by a distinct crescent of black; abdomen, flanks and under tail-coverts orange-brown; tail dark brown, the basal portion of the webs edged with grey; irides reddish brown; bill black; feet blackish brown.

The adult female has the crown of the head and all the upper surface grey; ear-coverts brownish grey; throat buffy white, passing into light buff or fawn-colour on the chest, flanks, abdomen and under tail-coverts; the feathers of the throat and chest with a narrow dark line down the centre; wings and tail as in the male.

The young male is similar in colour to the female, but has the throat whiter and the markings on the chest much more distinct, and extending over the abdomen also.

In very young individuals a rich rufous or tawny tint pervades the greater part of the upper surface.

The figures represent the two sexes of the natural size.



PACHYCEPHALA LANOÏDES: *Gould.*

PACHYCEPHALA LANOÏDES, *Gould.*

Shrike-like Pachycephala.

Pachycephala Lanoïdes, Gould in Proc. of Zool. Soc., Part VII. p. 142.

A SINGLE specimen only of this bird has come under my notice, and from the locality in which it was procured, the north-west coast of Australia, it is probable that it is the only one in Europe. On reference to the figure on the Plate, it will be seen that it is a most robust and powerful species, and that it so closely approximates to the form of the genus *Lanius*, that had it been a native of any other country than Australia, where the true Shrikes are not found, it might have been referred to that genus.

That it feeds on insects of a large size there can be but little doubt, its whole structure indicating that it exists upon this kind of food.

No information whatever has been obtained with respect to its habits and economy; this blank therefore remains to be filled up by those naturalists who may hereafter visit the part of the country of which it is a denizen.

Crown of the head, ear-coverts and chest black, bounded posteriorly by a narrow band of chestnut; throat, centre of the abdomen and under tail-coverts white; flanks, back, shoulders and external webs of the primaries, secondaries and wing-coverts grey; tail, bill and feet black.

The Plate represents the bird in two different positions, of the natural size.



EACHYCELLATA RUFGULARIS; Gould

PACHYCEPHALA RUFOGULARIS, *Gould.*

Red-throated Pachycephala.

Pachycephala rufogularis, Gould in Proc. of Zool. Soc., Part VIII. p. 164.

I HAVE never seen this species of *Pachycephala* in any other collection than my own; all the specimens therein contained fell to my own gun during my explorations in South Australia: I found it anything but abundant; in fact, although I was constantly seeking it, many days frequently elapsed without my procuring a specimen. Its stronghold, probably a part of the vast country of the interior, has yet to be discovered. From the little I saw of it, I am induced to believe that it is a very solitary bird, for I always encountered it singly, and mostly hopping about on the ground in the thinly-timbered forest which surrounds the city of Adelaide. Its actions were so particularly quiet, and its plumage so unattractive, that had not my attention been directed to birds of a sombre hue as well as to those of gay attire, I might have easily overlooked it. I never heard it utter any note, nor did I observe anything in its habits and economy worthy of remark. It doubtless resorted to the ground for coleopterous and other insects, the remains of which formed the contents of the stomachs of those I procured.

The adult males and females differ considerably in the colouring of their plumage; the young males resemble the females. The rusty colouring of the throat and face distinguishes this species from every other member of the genus.

As South Australia is the only country in which this rare species has yet been discovered, and as nothing whatever is known of its history, I would call the attention of future collectors to the subject, with a view of procuring information respecting it; and when I state that my specimens were procured within two miles of the city of Adelaide, it will be admitted that I am not imposing too great a task on my talented friend Governor Grey, and the other residents at Adelaide.

The male has the crown of the head and all the upper surface deep brownish grey; wings and tail dark brown, the feathers margined with greyish brown; lores, chin, throat, under surface of the shoulder and all the under surface reddish sandy brown, crossed on the breast by a broad irregular band of greyish brown; irides reddish brown; bill black; feet blackish brown.

The female differs from the male in having the throat and under surface greyish white, the chest being crossed by an obscure mark of greyish brown, and with a line down the centre of each feather.

The Plate represents the two sexes of the natural size.



PACHYCEPHALA GILBERTII: Gould.

J. Gould and H. C. Richter del et lith.

Andriensandels & Wulken hup

PACHYCEPHALA GILBERTII, *Gould.*

Gilbert's Pachycephala.

Pachycephala Gilbertii, Gould in Proc. of Zool. Soc., Part XII. p. 107.

ALTHOUGH the practice of naming species after individuals is a means by which the names of men eminent for their scientific attainments may be perpetuated to after-ages, I have ever questioned its propriety, and have rarely resorted to it; but in assigning the name of *Gilbertii* to this new and interesting species, I feel that I am only paying a just compliment to one who has most assiduously assisted me in the laborious investigations required for the production of the present work, and who was the discoverer of the birds forming the subject of this paper. The specimens transmitted to me by Mr. Gilbert are I believe all that have yet been procured.

Although the *P. Gilbertii* is nearly allied to the *P. rufogularis*, it may be readily distinguished by the rufous colouring being confined to the throat, and not ascending upon the forehead and occupying the space between the bill and the eyes as in that species; it is also a smaller bird in all its admeasurements.

Gilbert's Pachycephala is an inhabitant of the interior of Western Australia. The following notes, which are all that is known of its history, accompanied the specimens sent to me:—"This species inhabits the thick brushes of the interior. It is an early breeder, as is proved by my finding a nest with three newly-hatched young birds in the middle of August. The nest was built in the upright fork of a small shrub about four feet from the ground. It was deep, cup-shaped in form, and constructed of dried grasses, and except that it was rather more compactly built, it was very similar to those of the other members of the genus."

I trust that the publication of this species will induce Mr. Burgess, Mr. Drummond and other residents in Western Australia to seek for and investigate its history. To Mr. Drummond, and his son Mr. Johnson Drummond, botanical science is indebted for many valuable discoveries, and that this slight tribute to their labours in that department may induce them to turn their attention to other branches of natural history is my earnest wish.

The sexes of the present bird, as will be seen on reference to the accompanying Plate, exhibit a similar difference in colour as in the *P. rufogularis*; the females of both species being very sombre and devoid of any rufous colouring on the throat and breast.

The male has the upper surface dark greyish olive-brown; head dark slate-grey; breast of a lighter grey; lores black; throat rust-red; under surface of the shoulder, centre of the abdomen and under tail-coverts sandy buff; irides light brown; bill and feet black.

The figures represent the two sexes of the natural size.



PACHYCEPHALA SIMPLEX, *Gould.*

J. Gould and H. C. Richter del et lith.

Hillman del & Walton imp.

PACHYCEPHALA SIMPLEX, *Gould.*

Plain-coloured Pachycephala.

Pachycephala simplex, Gould in Proc. of Zool. Soc., Part X. p. 135.

THE *Pachycephala simplex* is a native of the north-western parts of Australia, but does not appear to be very numerous in any locality yet explored ; Mr. Gilbert, who discovered it in the neighbourhood of Port Essington, states that it is of a very shy and retiring disposition, and that it is usually met with in pairs hopping and creeping about among the underwood or very thickly-foliaged trees, but may be more frequently seen in thickets situated in the midst of swamps or among the mangroves. In its mode of feeding and in many of its actions it greatly resembles the Flycatchers, but does not like them shake or move the tail. Its voice, which is peculiarly soft and mournful, consists of a single note four times repeated with rather lengthened intervals ; this however appears to be its call-note only, for at other times it utters a somewhat pleasing and lengthened song ; “ but,” says Mr. Gilbert, “ I never heard it emit that sharp terminating note, resembling the smack of a whip, which concludes the song of all the other species of the genus.”

The stomach is muscular, and the food consists of insects and seeds of various kinds.

It appears to breed during the months of December, January and February, for the ovary of a female killed on the third of the last-mentioned month contained eggs very fully developed, and from the bare state of the breast appeared to have been already engaged in the task of incubation.

All the upper surface brown ; under surface brownish white, with a very faint stripe of brown down the centre of each feather ; irides light brown ; bill and feet black.

The Plate represents the two sexes of the natural size.



PACHYCEPHALA OLIVACEA: Vig & Horsf.

PACHYCEPHALA OLIVACEA, *Vig. and Horsf.*

Olivaceous Pachycephala.

Pachycephala olivacea, Vig. and Horsf. in Linn. Trans., vol. xv. p. 241.—Gould in Syn. Birds of Australia, Part III.

THIS species, the largest of the genus yet discovered, is a native of Van Diemen's Land, where it inhabits forests and thick scrubby situations, and is very generally dispersed over the island from north to south; I observed it also on Flinders' Island in Bass's Straits, but no instance has come under my notice of its occurrence on the continent of Australia. It is rather recluse in its habits, and were it not for its oft-repeated, loud, sharp, liquid, whistling note, its presence would not often be detected. I usually met with it in the thickest parts of the forests, where it appeared to resort to the ground rather than to the branches, and to frequent gulleys and low swampy situations beneath the branches of the dwarf *Eucalypti* and other trees, with which its olive colouring so closely assimilated, that it was very difficult to perceive it.

Although I felt assured that the bird was breeding in many parts of the country, and made repeated attempts to discover its nest, I could never succeed in so doing; the eggs are therefore among the desiderata of my cabinet.

But little outward difference is observable in the sexes; the male is rather the largest and has the head of a sooty greyish brown, while the head of the female is olive-brown. The young resemble the female, and assume the adult colouring at an early age.

The stomachs of several specimens dissected were very muscular, and contained the remains of coleoptera and hemiptera mingled in some instances with small stones and seeds.

Crown of the head and ear-coverts dark brown; back, wings and tail chestnut-olive, the chestnut predominating on the back; throat greyish white, each feather tipped with brown; chest, abdomen and under tail-coverts reddish brown; bill black; irides reddish brown; feet mealy reddish brown.

The Plate represents a male and a female of the natural size.



COLLURICINCLA HARMONICA.

COLLURICINCLA HARMONICA.

Harmonious Colluricincla.

Turdus harmonicus, Lath. Ind. Orn. Supp. p. xli.

Harmonic Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 182.—Shaw, Gen. Zool., vol. x. p. 217.—Lath. Gen. Hist., vol. v. p. 120.

Grey-headed Thrush, Lath. Gen. Hist., vol. v. p. 118.

Colluricincla cinerea, Vig. and Horsf. in Linn. Trans., vol. xv. p. 214.—Jard. and Selb. Ill. Orn., vol. ii. pl. 71.—Less. Traité d'Orn., p. 374.—Ib. Man. d'Orn., tom. i. p. 131.—Swains. Class. of Birds, vol. ii. p. 221.—G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 49.

Lanius Saturninus, Nordm.

Turdus dilutus, Lath. Ind. Orn. Supp., p. xl ?—Bonn. et Vieill. Ency. Méth. Orn., part ii. p. 660 ?

Dilute Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 182 ?—Shaw, Gen. Zool., vol. x. p. 208 ?—Lath. Gen. Hist., vol. v. p. 120 ?

Turdus badius, Lath. Ind. Orn. Supp., p. xli ?—Bonn. et Vieill. Ency. Méth. Orn., part ii. p. 670 ?

Port Jackson Thrush, Lath. Gen. Syn., vol. ii. p. 183.—White's Voy., pl. in p. 157.—Shaw, Gen. Zool., vol. x. p. 198.—Lath. Gen. Hist., vol. v. p. 121.

Austral Thrush, Lath. Gen. Hist., vol. v. p. 124 ?

As the members of this genus, originally formed on a single species, are now found to be numerous, but all very nearly allied, it becomes necessary to describe this, the typical bird, with particular accuracy. Nearly every colony appears to be inhabited by its own peculiar species ; and accordingly we find that the present bird is an inhabitant of New South Wales, but extends its range westward as far as South Australia and eastward to Moreton Bay, and perhaps farther.

The *Colluricincla harmonica* is one of the oldest known of the Australian birds, having been described in Latham's "Index Ornithologicus," figured in White's "Voyage," and included in the works of all subsequent writers.

So generally is it dispersed over the countries of which it is a native, that there are few localities in which it is not to be found ; the brushes near the coast as well as the plains of the interior being equally frequented by it ; it is a very active bird, living much among the branches, and feeding upon insects of various kinds, caterpillars and their larvæ.

The term *harmonica* applied to this species is very appropriate ; for although it does not give utterance to any continued song, it frequently pours forth a number of powerful swelling notes, louder but less varied than those of the Song Thrush of Europe ; and it is somewhat singular that these notes are emitted while in the act of feeding, and while engaged in the search of its insect food.

The site of the nest is very varied ; sometimes a hollow in the upright bole of a small tree is chosen ; at others the ledge of a decayed branch, or a rock, or any similar situation. The nest is a cup-shaped, and somewhat slight structure, externally composed of the outer and inner bark of trees and leaves, and lined with fibrous roots ; I have occasionally seen wool intermingled with the outer materials. The eggs, which are three in number, and one inch and two lines long by ten lines broad, are of a beautiful pearly white, thinly sprinkled with large blotches of light chestnut-brown and dull bluish grey, the latter colour appearing as if beneath the surface of the shell. In one instance I found a nest of eggs which were brownish white instead of pearly white.

The sexes are very nearly alike, the only difference being that the female has the bill browner and an indication of a white stripe over the eye.

Head brownish grey, with an indistinct line of brown down the centre of each feather ; back of the neck, back and shoulders olive-brown ; wings slaty black margined with grey ; rump and tail grey, the latter with dark brown shafts ; under surface light brownish grey, fading into pure white on the vent and under tail-coverts and greyish white on the throat, each of the throat and breast feathers with a fine line of brown down the centre ; irides dark brown ; bill blackish brown ; feet dark greenish grey.

The Plate represents a male and a female on a nest, all of the natural size.



COLLURICINCLA RUFIVENTRIS: *Could.*

COLLURICINCLA RUFIVENTRIS, *Gould.*

Buff-bellied Colluricincla.

Colluricincla rufiventris, Gould in Proc. of Zool. Soc., Part VIII. p. 164.

Goo'-dee-lung, Aborigines of Western Australia.

Thrush, of the Colonists.

THIS species is about the size of the *Colluricincla harmonica*, for which at a first glance it might be mistaken, but from which on comparison it will be found to differ in the following particulars :—the whole of the upper surface is pure grey instead of brown ; the abdomen and under tail-coverts are deep buff instead of greyish white ; and the lores are much more distinctly marked with white. It is a native of Western Australia, where it is to be found in all thickly wooded places, feeding as much on the ground as among the trees and scrubs. In its actions, the positions it assumes, and in its general manners, it very closely resembles the Common Thrush of Europe. Its voice is a very loud, full and rich swelling note with a few connecting sounds, the whole much resembling, but not equalling in melody, the call-note of the European Thrush.

It breeds in the latter part of September and the beginning of October, and the nest, which is generally placed in the hollow part of a high tree, is formed of dried strips of gum-tree bark very closely packed and deep, and is sometimes lined with soft grasses. The eggs, which are two or three in number, are of a beautiful bluish or pearly white, with large blotches of reddish olive-brown and dark grey, the latter appearing as if beneath the surface of the shell ; the medium length of the eggs is one inch and one line by ten lines in breadth.

Mr. Gilbert mentions that upon two occasions he found the eggs of this bird in old nests of *Pgmatorhinus superciliosus*.

The stomach is muscular, and the food consists of insects, principally of the coleopterous order, and seeds.

Lores greyish white ; crown of the head and all the upper surface deep grey, slightly tinged with olive ; primaries and tail dark brown, margined with brownish grey ; throat and under surface darkish grey, passing into buff on the vent and under tail-coverts ; all the feathers of the under surface have a narrow dark line down the centre ; thighs grey ; irides dark reddish brown ; bill blackish brown ; feet dark greenish leaden grey.

The figures represent a male and a female of the natural size.



COLLURICINCLA BRUNNEA: *Gould.*

COLLURICINCLA BRUNNEA, *Gould.*

Brown Colluricincla.

Colluricincla brunnea, Gould in Proc. of Zool. Soc., Part VIII. p. 164.

Men-e-loo-roo, Aborigines of Port Essington.

THIS bird is abundantly dispersed over the Cobourg Peninsula, and is to be met with in all the forests in the immediate neighbourhood of Port Essington, in which distant locality it represents the *Colluricincla harmonica* of New South Wales, the *Colluricincla Selbii* of Van Diemen's Land, and the *Colluricincla rufiventris* of Western Australia. As might be expected, its habits and manners are very similar to those of the other species of the genus, consequently the description of those of *Colluricincla harmonica* is equally descriptive of those of *Colluricincla brunnea*.

A nest of this bird found on the 2nd of February was built in the upper part of a hollow stump, and was outwardly formed of narrow strips of the bark of the *Melaleuca* and lined with fine twigs. The eggs are of a pearly bluish white, spotted and blotched with markings of olive-brown and grey, the latter colour appearing as if beneath the surface of the shell; their medium length is one inch and two lines by ten lines in breadth.

It is a larger and more robust species than either *C. harmonica* or *C. rufiventris*, the bill is shorter and much stouter, and the colouring is of a uniform light brown; even the primaries and tail-feathers are of the same hue.

All the upper surface pale brown; primaries and tail the same, but somewhat lighter; all the under surface brownish white, becoming almost pure white on the vent and under tail-coverts; thighs greyish brown; bill black; feet blackish brown.

The Plate represents the two sexes of the natural size.



COLLURICINCLA SELBII, *Jard.*

Selby's Colluricincla.

Colluricincla Selbii, Jard. in Jard. and Selby's Ill. Orn., vol. i. note to text of pl. 71.

———— *rectirostris*, Jard. and Selby's Ill. Orn., vol. iv. pl. xxxi.

———— *strigata*, Swains. Anim. in Menag. &c., p. 283, female or young male.

Whistling Dick, of the Colonists of Van Diemen's Land.

THE *Colluricincla Selbii* is a native of, and a permanent resident in, Van Diemen's Land and Flinders' Island, over all parts of which it is very generally, but nowhere very abundantly, distributed ; it appears to give a decided preference to the thick woods, wherein its presence may always be detected by its loud, clear, liquid and melodious whistle. It is distinguished from all the other members of the genus by the greater length of the bill, and by the female having a broad stripe of rust-red over the eye. It does not appear to confine itself to any particular part of the forest, for it may sometimes be observed on the low scrub near the ground, and at others on the topmost branches of the highest trees.

It feeds on caterpillars and insects of various kinds, which it often procures by tearing off the bark from the branches of the trees in the most dexterous manner with its powerful bill, and while thus employed frequently pours forth its remarkable note. In disposition it is lively and animated, confident and fearless, and might doubtless be easily tamed, when it would become a most interesting bird for the aviary.

The nest, although composed of coarse materials, is a remarkably neat structure, round, rather deep and cup-shaped, outwardly formed of strips of the rind of the stringy bark-tree and lined with a few grasses ; it is about five inches in diameter and four in height, the interior being three inches and a half in breadth by two and a half in depth. The sites usually selected for the nest are the hollow open stump of a tree, a cleft in a rock, &c.

The sexes, which differ considerably from each other, may be thus described :—

The male has the general plumage dark slate-grey, deepening into brown on the back and wings, much paler on the under surface, and fading into white on the throat and breast ; over the eye a faint stripe of greyish white ; bill black ; irides brown ; feet light lead-colour.

The female has all the upper surface, wings and tail brown ; upper tail-coverts slate-grey ; over the eye a stripe of rust-red ; under surface light grey tinged with brown on the throat and breast, and each feather with a stripe of dark brown down the centre ; bill horn-colour at the base, black at the tip.

The young is similar to the female, but has the stripes of the under surface much broader and more conspicuous, the line over the eye of a deeper red, and the tail grey.

The Plate represents a male, a female, and a young bird of the natural size.



COTURNICUSULA PARVULA: *Gould.*

COLLURICINCLA PARVULA, *Gould.*

Little Colluricincla.

Colluricincla parvula, Gould in Proc. of Zool. Soc., May 27, 1845.

THIS species, to which I have given the name of *parvula*, from the circumstance of its being the smallest of the genus that has come under my notice, is a native of Port Essington and the neighbouring parts of the northern coast of Australia. Mr. Gilbert, to whose notes I must refer for all that is known about it, states that it is an inhabitant of the thickets; is an extremely shy bird, and is generally seen on or near the ground. Its note is a fine thrush-like tone, very clear, loud and melodious. The stomach is muscular, and the food consists of insects of various kinds, but principally of coleoptera. The nest and eggs were brought me by a native; they were taken from the hollow part of a tree about four feet from the ground; the former, which was too much injured to be preserved, was formed of small twigs and narrow strips of the bark of a *Melaleuca*. The eggs were two in number, of a beautiful pearly flesh-white, regularly spotted all over with dull reddish orange and umber-brown; like the eggs of the other species of the genus, they are also sprinkled over with bluish markings, which appear as if beneath the surface of the shell; their medium length is one inch, and breadth nine lines.

The sexes are so nearly alike in plumage, that they are not readily distinguished from each other; but the male is somewhat larger than his mate.

All the upper surface, wings and tail olive-brown; a faint line over the eye and the chin white; all the under surface pale buff, the feathers of the throat and breast with a broad stripe of brown down the centre; irides dark brownish red; bill blackish grey; tarsi bluish grey.

The figures are of the natural size.



FALCUNCULUS FRONTATUS: Vieill.

FALCUNCULUS FRONTATUS, Vieill.

Frontal Shrike-Tit.

Lanius frontatus, Lath. Ind. Orn., p. xviii.—Shaw, Gen. Zool., vol. vii. p. 312.—Temm. Man., Part I. p. lix.—Ib. Pl. Col., pl. 77.

Frontal Shrike, Lath. Gen. Syn. Supp., vol. ii. p. 75, pl. 122.—Ib. Gen. Hist., vol. ii. p. 72, pl. xx.

Falcunculus frontatus, Vieill. Gal. des Ois., tom. i. pl. 138.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 212.—G. R. Gray, List of Gen. of Birds, p. 36.—Less. Traité d'Orn., p. 372.

Falcunculus flavigulus, Gould in Proc. of Zool. Soc., Part V. p. 144 ; and in Syn. Birds of Australia, Part IV., young?

I HAD many opportunities of observing this bird, both in New South Wales and South Australia, over both of which countries it is very generally although not numerously dispersed. It does not inhabit Western Australia, neither have I as yet received it from the north coast. It alike inhabits the thick brushes as well as the trees of the open plains. Its chief food is insects, which are either obtained among the foliage or under the bark of the larger branches and trunks of the trees ; in procuring these it displays great dexterity, stripping off the bark in the most determined manner, for which purpose its powerful bill is admirably adapted.

It is very animated and sprightly in its actions, and in many of its habits bears a striking resemblance to the Tits, particularly in the manner in which it clings to and climbs among the branches in search of food. While thus employed it frequently erects its crest and assumes many pert and lively positions : no bird of its size with which I am acquainted possesses greater strength in its mandibles, or is capable of inflicting severer wounds, as I experienced on handling one I had previously winged, and which fastened on my hand in the most ferocious manner.

As far as I am aware, the *Falcunculus frontatus* is not distinguished by any powers of song, merely uttering a few low piping notes.

I could neither succeed in procuring the nest of this species nor obtain any authentic information respecting its nidification.

The stomachs of the specimens I dissected were filled with the larvæ of insects and berries.

The male has immediately above the bill a narrow band of white, from which, down the centre of the head, is a broad stripe of black feathers forming a crest ; sides of the face and head white, divided by a line of black which passes through the eye to the nape ; back, shoulders and wing-coverts olive ; primaries and secondaries blackish brown broadly margined with grey ; tail blackish brown broadly margined with grey, especially on the two centre feathers ; two outer tail-feathers and tips of the remainder white, the white diminishing on each feather as it approaches the centre of the tail ; throat black ; all the under surface bright yellow ; irides reddish brown ; bill black ; legs and feet bluish grey.

The sexes may at all times be distinguished from each other by the smaller size of the female, and by the colouring of the throat being green instead of black ; by the irides being darker and the feet bluish lead-colour.

The Plate represents a male and a female of the natural size, on a branch of a shrub-like tree which I gathered in the district of Illawarra, but of which I have not been able to obtain the name.



FALCUNCULUS LEUCOGASTER: *Gould.*

FALCUNCULUS LEUCOGASTER, *Gould.*

White-bellied Shrike-Tit.

Falcunculus leucogaster, Gould in Proc. of Zool. Soc., Part V. p. 144 ; and in Syn. Birds of Australia, Part IV.

Goore-beet-goore-beet, Aborigines of the lowland districts of Western Australia.

Jil-le-e-lee, Aborigines of the mountain districts of ditto.

Djoon-dool-goo-roon, Aborigines of the Murray in ditto.

THIS species is an inhabitant of the western portions of Australia, where it forms a beautiful representative of the *Fal. frontatus* of the eastern coast, from which it may be readily distinguished by its white abdomen ; it is very generally dispersed over the colony of Swan River, although, like its near ally, it is not to be met with in great abundance. It is usually seen in pairs among the thickly-foliaged trees, particularly such as grow in quiet secluded places, and is a most active little bird, running over the trunks and branches of the trees with the greatest facility, and tearing off the bark in its progress in search of insects : the habits in fact of the present and Frontal Shrike-Tit are so closely similar that a separate description is unnecessary. Its flight is of short duration, and is seldom employed for any other purpose than that of flitting from branch to branch, or from one tree to another. Its note is a series of mournful sounds, the last of which is drawn out to a greater length than the preceding ones.

The stomach is extremely muscular, and its food consists principally of coleoptera.

The male has immediately above the bill a narrow band of white, from which, down the centre of the head, is a broad stripe of black feathers forming a crest ; sides of the face and head white, divided by a line of black, which passes through the eye to the nape ; back, rump, shoulders and wing-coverts bright yellowish olive ; primaries and secondaries blackish brown, margined with olive-yellow ; tail-feathers blackish brown, margined with olive-yellow, except the two outer, which are grey, broadly margined with white ; all the tail-feathers tipped with white, the white diminishing on each feather as it approaches the centre of the tail ; throat black ; chest, upper part of the breast, and under tail-coverts bright yellow ; abdomen and thighs white ; irides wood-brown ; bill dark brown, becoming lighter at the edges of the mandibles ; legs and feet greenish blue.

The female differs from her mate in being somewhat smaller in size, and in having the throat green instead of black.

The figures are those of a male and female, of the natural size.



OREOICA GUTTURALIS.

OREOÏCA GUTTURALIS, *Gould.*

Crested Oreoïca.

Falcunculus gutturalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 212.

Crested Thrush, Lewin, Birds of New Holl., pl. 9. fem.

Oreoïca gutturalis, Gould in Proc. of Zool. Soc., Part V. p. 151; and in Syn. Birds of Australia, Part IV.—

G. R. Gray, List of Gen. of Birds, 2nd edit., p. 48.

Bo-kûrn-bo-kûrn, Aborigines of the mountain districts of Western Australia.

Bell-bird, Colonists of Swan River.

THIS very singular bird possesses an extremely wide range of habitat, being dispersed over the whole of the southern portion of Australia from east to west. It has not yet been discovered in Van Diemen's Land or in any of the islands in Bass's Straits, neither has the extent of its range northwards yet been ascertained. It is, I believe, everywhere a stationary species, but although its distribution is so general, it is nowhere very plentiful. From what I observed of it, it appeared to give a decided preference to the naked sterile crowns of hills and open bare glades in the forests, and I should say that its presence is indicative of a poor and bad land. It resorts much to the ground, over the surface of which it hops with great quickness, often in small companies of from three to six in number. When flushed it flies but a short distance, generally to a large horizontal branch of a neighbouring *Eucalyptus*, along which it passes in a succession of quick hops, similar to those of the Common Sparrow of Europe. It is very animated in many of its actions, particularly the male, whose erected crest and white face, relieved by the beautiful orange-colour of the eye, gives it a very sprightly appearance. The female, on the other hand, being nearly uniform in colour, having the eye hazel and the crest less developed, is by no means so attractive. I regret much that it is not in my power to convey an idea of the note uttered by this bird, which is singular in the extreme; besides which it is a perfect ventriloquist, its peculiar, mournful, piping whistle appearing to be at a considerable distance, while the bird is perched on a large branch of a neighbouring tree. To aid my recollections I find the following remarks in my note-book:—"Note, a very peculiar piping whistle, sounding like *weet-weet-weet-weet-oo*, the last syllable fully drawn out and very melodious." In Western Australia, where the real Bell-bird is never found, this species has had that appellation given to it,—a term which must appear ill-applied to those who have heard the note of the true Bell-bird of the brushes of New South Wales, whose tinkling sound so nearly resembles that of a distant sheep-bell as occasionally to deceive the ears of a practised shepherd. My assistant Mr. Gilbert having also noted down to the best of his power the singular note of this species, I give it in his own words, but neither his description nor my own can convey anything like an accurate idea of it; notes of birds, in fact, are not to be described,—they must be heard to be understood. "The most singular feature," says Mr. Gilbert, "connected with this bird is, that it is a perfect ventriloquist. At first its note commences in so low a tone that it sounds as if at a considerable distance, and then gradually increases in volume until it appears over the head of the wondering hearer, the bird that utters it being all the while on the dead part of a tree, perhaps not more than three or four yards distant; its motionless attitude rendering its discovery very difficult. It has two kinds of song, the most usual of which is a running succession of notes, or two notes repeated together rather slowly, followed by a repetition three times rather quickly, the last note resembling the sound of a bell from its ringing tone; the other song is pretty nearly the same, only that it concludes with a sudden and peculiar fall of two notes."

It flies in heavy undulating sweeps, generally so near the ground that it seems as if it would scarcely take the trouble to rise above the scrub or small trees that may lie in its course.

In Western Australia its nest is formed of strings of bark, lined with a few fine dried grasses, and is generally placed in a *Xanthorrea* or grass-tree, either in the upper part of the grass or rush above, or in the fork of the trunk, and is of a deep cup-shaped form. It breeds in October, and generally lays three eggs, which vary much in colour; the ground-tint being bluish white, in some instances marked all over with minute spots of ink-black, in others with long zigzag lines and blotches of the same hue. In some these

markings are confined to the larger end, where they form a zone ; in others they are equally spread all over the surface, intermingled with the black markings ; also blotches of grey appear as if beneath the surface of the shell, and some eggs have been found with the ground-colour of the larger end of a beautiful bluish green.

In its nidification and in many of its actions it offers considerable resemblance to the members of the genus *Colluricincla*.

It has a thick muscular gizzard, and its food consists of seeds, grain, coleoptera, and the larvæ of all kinds of insects. In Western Australia it often resorts to newly ploughed land, as it there finds an abundance of grubs and caterpillars, its most favourite food.

The sexes present considerable difference in colour.

The male has the face white ; feathers on the forepart of the head, along the centre of the crest, line from the eye bounding the white of the face, and a large gorget-shaped mark on the breast deep black ; sides of the head and crest grey ; all the upper surface and flanks light brown ; wings brown margined with lighter brown ; tail dark brown ; centre of the abdomen brownish white ; vent and under tail-coverts buff ; irides beautiful orange, surrounded by a narrow black lash ; bill black ; legs and feet blackish brown.

The female resembles the male, but differs in having the face and forehead grey, only a line of black down the centre of the crest, the chin dull white, in having a mere indication of the black gorget, the irides hazel, and the feet olive- or dark brown.

The figures are of the natural size.



DICTYRUS BRACHYOTIS, Gould.

DICRURUS BRACTEATUS, *Gould.*

Spangled Drongo.

Dicrurus Balicassius, Vig. and Horsf. in Linn. Trans., vol. xv. p. 211.

———— *bracteatus*, Gould in Proc. of Zool. Soc., Part x. p. 132.

HAVING carefully compared the bird here represented with the other species of the genus inhabiting Africa, the continent of India and the Indian islands, I find it to be quite distinct from the whole of them; I have therefore assigned to it a separate specific title, and selected that of *bracteatus* as expressive of its beautifully spangled appearance. Its range is very extensive, the bird being equally abundant in all parts of the northern and eastern portions of Australia; it was found by Captain Grey on the north-west coast, by Mr. Gilbert at Port Essington, and it has also been observed in the neighbourhood of Moreton Bay on the east coast. I did not encounter it myself during my rambles in Australia; we are therefore indebted to Mr. Gilbert's notes for all that is known of its history. "This species," says he, "is one of the commonest birds of the Cobourg Peninsula, where it is generally seen in pairs and may be met with in every variety of situation, but more frequently among the thickets and mangroves than elsewhere. It is at all times exceedingly active and is strictly insectivorous; its food consisting entirely of insects of various kinds, but particularly those belonging to the orders *Coleoptera* and *Neuroptera*. Its mode of flight and its voice are both exceedingly variable; its usual note is a loud, disagreeably harsh, cackling or creaking whistle, so totally different from that of any other bird, that having been once heard it is readily recognised.

"I found five nests on the 16th of November, all of which contained young birds, some of them nearly able to fly, and others apparently but just emerged from the egg. The whole of these nests were exactly alike and formed of the same material, the dry wiry climbing stalk of a common parasitic plant, without any kind of lining; they were exceedingly difficult to examine from their being placed on the weakest part of the extremities of the horizontal branches of a thickly-foliaged tree at an altitude of not less than thirty feet from the ground; they were of a very shallow form, about five inches and a half in diameter; the eggs would seem to be three or four in number, as three of the nests contained three, and the other two four young birds in each."

The head and the body both above and below are deep black, the feathers of the head with a crescent, and those of the body, particularly of the breast, with a spot of deep metallic green at the tip; wings and tail deep glossy green; under wing-coverts black tipped with white; irides brownish red; bill and feet blackish brown.

The Plate represents a specimen procured at Port Essington of the natural size, and I may remark that examples obtained in that locality are somewhat smaller than those killed on the north-western and eastern coasts.



RHIPIDURA ALBISCAPA, *Gould.*

White-shafted Fantail.

Rhipidura flabellifera, Vig. and Horsf. in Linn. Trans., vol. xv. p. 247, excl. of Syn.—Swains. Nat. Lib. Orn., vol. x.: Flycatchers, p. 124, pl. 10; and Class. of Birds, vol. ii. p. 257.

Rhipidura albiscapa, Gould in Proc. of Zool. Soc., September 8, 1840.

It would appear that two species of Fan-tailed Flycatchers have hitherto been confounded under one specific appellation; for if a comparison be made, it will be obvious to every one, that the bird here represented is quite distinct from that described and figured by Latham, in the sixth volume of his "General History of Birds," as *Motacilla flabellifera*, and which he states is a native of New Zealand. It is true, the Australian birds from different localities present considerable variations in the depth of their colour, still they never have the lateral tail-feathers entirely white as in the New Zealand bird: specimens from Van Diemen's Land are always much darker than those of the continent, and have the tail-feathers less marked with white; others from Western Australia, again, are somewhat lighter in colour, and have the white markings of the tail more extensive than in those collected in South Australia or New South Wales. The accompanying illustration represents the darkest of these varieties, and with the nest and plant (*Culcitium salicinum*) was drawn in Van Diemen's Land.

Judging from what facts I could gather respecting the economy of the White-shafted Fantail, I am induced to regard it as a permanent resident rather than a migratory species, changing its localities according to the season of the year; resorting to the more open parts during the summer months, and retiring in autumn to thick brushes and warm secluded gullies, where it still finds a supply of food, such as *aphides* and other small insects, upon which it almost exclusively subsists.

In Van Diemen's Land I have seen it in the depth of winter in the gullies on the sunny sides of Mount Wellington; and it is my opinion, that instead of migrating they only retire at this season to such localities as are sheltered from the bleak south-westerly winds which then so generally prevail, and where insects are still to be found. The bird is also subject to the same law on the continent of Australia; but as the temperature of that country is more equable, its effects are not so apparent; and in support of this opinion I may adduce the remark of Caley, who says, "The species is very common about Paramatta; and I do not recollect having missed it at any period of the year."

It is generally found in pairs, but I have occasionally seen as many as four or five together. It inhabits alike the topmost branches of the highest trees, those of a more moderate growth, and the shrouded and gloomy foliaged dells in the neighbourhood of rivulets: from these retreats it darts out a short distance to capture insects, and in most instances returns again to the same branch it had left. While in the air it assumes a number of lively and beautiful positions, at one moment mounting almost perpendicularly, constantly spreading out its tail to the full extent, and frequently tumbling completely over in the descent; at another it may be seen flitting through the branches, and seeking for insects among the flowers and leaves, repeatedly uttering a sweet twittering song.

The Fantail is rather a late breeder, scarcely ever commencing before October, during which and the three following months it rears two, and often three broods. Its elegant little nest, closely resembling a wine-glass in shape, is woven together with exquisite skill, and is generally composed of the inner bark of a species of *Eucalyptus*, neatly lined with the down of the tree-fern intermingled with flowering stalks of moss, and outwardly matted together with the webs of spiders, which not only serve to envelope the nest, but are also employed to strengthen its attachment to the branch on which it is constructed. The situation of the nest is much varied: I have observed it in the midst of dense brushes, in the more open forest, and placed on a branch overhanging a mountain rivulet, but at all times within a few feet of the ground. The eggs are invariably two in number, seven lines long; their ground colour white, blotched all over, but particularly at the larger end, with brown slightly tinged with olive: the young from the nest assume so closely the colour and appearance of the adults, that they are only to be distinguished by the secondaries and wing-coverts being margined with brown, a feature lost after the first moult. The adults are so precisely alike, that actual dissection is necessary to determine the sexes.

In its disposition this little bird is one of the tamest imaginable, allowing of a near approach without evincing the slightest timidity, and will even enter the houses of persons resident in the bush in pursuit of gnats and other insects. During the breeding-season, however, it exhibits extreme anxiety at the sight of an intruder in the vicinity of its nest, the site of which is always betrayed by its becoming more agitated and active in its movements as he draws near: if approached unobserved, it may be often seen mounting in the air and singing while its mate is performing the duty of incubation.

From what I have here stated it will be seen that this species has a most extensive range over the southern portion of Australia, and in all probability it will be found in every part of that vast country.

Adult birds from Van Diemen's Land have the whole of the upper surface, ear-coverts, and a band across the chest sooty black, slightly tinged with olive, the tail, crown of the head, and pectoral band being rather the darkest; stripe over the eye, lunar-shaped mark behind the eye, throat, tips of the wing-coverts, margins of the secondaries, shafts, outer webs and tips of all but the two middle tail-feathers white; under surface buff; eyes black; bill and feet brownish black.

The figures are of the natural size.



RHIPIDURA RUFIFRONS.

J. Gould and H. C. Richter del. et lith.

Hallman and J. S. Walton imp.

RHIPIDURA RUFIFRONS.

Rufous-fronted Fantail.

Muscicapa rufifrons, Lath. Ind. Orn. Suppl., p. 1.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xxi. p. 465.

—Bonn. et Vieill. Ency. Méth. Orn., part ii. p. 809.

Orange-rumped Flycatcher, Lewin, Birds of New Holl., pl. 13.

Rufous-fronted Flycatcher, Lath. Gen. Syn. Suppl., vol. ii. p. 220.—Shaw, Gen. Zool., vol. x. p. 373.—Lath. Gen. Hist., vol. vi. p. 213.

Rhipidura rufifrons, Vig. and Horsf. in Linn. Trans., vol. xv. p. 248.—Less. Man. d'Orn., tom. i. p. 199.

Bur-ril, Aborigines of New South Wales.

THE Rufous-fronted Fantail is one of the most beautiful and one of the oldest known members of the group to which it belongs, having been originally described by Latham in his "Index Ornithologicus," and included in the works of nearly every subsequent writer on Ornithology. In Mr. Caley's short but valuable "Notes on the Birds of New South Wales," he says, "This bird appears to me to be a rare one, at least I do not recollect having ever seen any other specimen than the present. I met with it on the 15th of October 1807, at Cardunny, a place about ten miles to the north-east of Paramatta. It is a thick brush (or under-wood), and is the resort of the *great Bat*." The fact of the colony having at that early date been but little explored will readily account for Caley's opinion of the rarity of this bird; but had he visited the thick brushes of Illawarra, the Liverpool range and the Hunter, he would have found that those situations are its natural habitat, and that it is there to be met with in considerable numbers.

Although many of its habits closely resemble those of the *Rhipidura albiscapa*, they are, as the greater length of its legs would indicate, far more terrestrial; it runs over the ground and the fallen logs of trees with great facility; while thus engaged, and particularly when approached by an intruder, it constantly spreads and displays its beautiful tail, and evinces a great degree of restlessness. It is always found in the most secluded parts of the forest, no portion of which appears to be too dense for its abode.

I never met with it in Van Diemen's Land, or on the islands in Bass's Straits, neither do I recollect having seen it in South Australia; and it has not been found in Western Australia, or on the north coast, in which latter locality it is represented by the *Rhipidura Dryas*.

I had no opportunity of observing it during the breeding-season, but frequently encountered its deserted little cup-shaped nests, which bore a general resemblance to that of the *R. albiscapa*, figured on the preceding plate.

The sexes are precisely alike in colour; and their only outward difference consists in the somewhat smaller size of the female.

Forehead rusty red, continuing over the eye; crown of the head, back of the neck, upper part of the back and wings olive-brown; lower part of the back, tail-coverts, and the basal portions of the tail rusty red; remainder of the tail blackish brown, obscurely tipped with light grey; the shafts of the tail-feathers for nearly half their length from the base light rusty red; throat and centre of the abdomen white; ear-coverts dark brown; chest black, the feathers of the lower part edged with white; flanks and under tail-coverts light fawn-colour; eyes, bill and feet brown.

The figures are of the natural size.



RHIPIDURA ISURA: Gould.

J. Gould and F.C. Richter del et lith.

Hallmandel & Walton Imp.

RHIPIDURA ISURA, *Gould.*

Northern Fantail.

Rhipidura isura, Gould in Proc. of Zool. Soc., Part VIII. p. 174.

THIS species is an inhabitant of the north and north-west coasts of Australia, in which localities specimens have been procured by His Excellency Governor Grey and by Mr. Gilbert, the latter of whom states that it is abundant in all parts of the Cobourg Peninsula, and that it is to be met with in every variety of situation; that it is usually seen in pairs, and that it secludes itself during the heat of the day amidst the dense thickets of mangroves.

A nest found by Mr. Gilbert in the early part of November appeared to have been recently inhabited by young birds; it was placed in the centre of three upright twigs of a species of *Banksia*, and was formed of narrow strips of bark, firmly bound together on the outside with cobwebs and vegetable fibres; it was very cup-like in shape, about two inches and a half in height, one inch and three-quarters in diameter, and three-quarters of an inch in depth.

The stomach is tolerably muscular, and the food consists of insects of various kinds and their larvæ.

All the upper surface dull brown; wings and tail darker brown, the outer feather of the latter on each side margined externally and largely tipped with white, the next having a large irregular spot of white at the tip, and the next with a minute line of white near the tip; chin and under surface buffy white, with an indication of a dark brown band across the chest; bill and feet black.

The Plate represents a male and a female of the natural size.



RHIPIDURA MOTACILLOIDES: Vig. & Horsf.

J. Gould and H. C. Richter del. & lith.

Bulfinch & Walton Imp.

RHIPIDURA MOTACILLOIDES, *Vig. and Horsf.*

Black Fantailed Flycatcher.

Rhipidura Motacilloides, Vig. and Horsf. in Linn. Trans., vol. xv. p. 248.

Wil-la-ring, Aborigines of the lowland, and

Jit-te-jit-te, Aborigines of the mountain districts of Western Australia.

Wagtail Flycatcher, of the Colonists of Swan River.

WITH the exception of Van Diemen's Land, this bird has been found in every part of Australia yet visited by Europeans. A slight difference is observable in the size of the specimens from different localities, those from New South Wales being the largest and those from Port Essington the least: the latter may hereafter prove to be specifically distinct.

At the same time that it is one of the most widely diffused, it is also one of the most tame and familiar of the Australian birds, and consequently a general favourite; it is constantly about the houses, gardens and stock yards of the settlers, often running along the backs and close to the noses of the cattle in order to secure the insects which are roused and attracted by the heat from their nostrils, along the roofs of the buildings, the tops of palings, gates, &c.; constructing its pretty nest beneath the verandah, and even entering the rooms to capture its insect prey; it passes much of its time on the ground, over which it runs and darts with the utmost celerity, and when skirting the stream with tail erect and shaking from side to side, it presents an appearance very similar to that of the English Black and White Wagtail (*Motacilla Yarellii*); the movements of the tails of the two birds are, however, very different, that of the European being perpendicular, while that of the Australian is lateral.

Its song, which consists of a few rather loud and shrill notes, is continually poured forth throughout the entire night, especially if it be moonlight.

Its flight is at times gracefully undulating, at others it consists of a series of sudden zigzag starts, but is always of a very short duration; it never poises itself in the air, like the *Seisura volitans*, and never mounts higher than the tops of the trees, appearing to prefer hopping from tree to tree to flying.

It commences breeding in September and generally rears two or three broods. Its beautiful deep cup-shaped and compact nest is very often built on a branch overhanging water, or on the dead limb of a tree overshadowed by a living branch above it, but the usual and favourite site is the upper side of a fallen branch without the slightest shelter from the sun and rain, at about three or four feet from the ground; the nest itself is constructed of dried grasses, strips of bark, small clumps of grass, roots, &c., all bound and firmly matted together and covered over with cobwebs, the latter material being at times so similar in appearance to the bark of the branch, that the entire nest looks like an excrescence of the wood, consequently it is almost impossible to detect it; it is lined with a finer description of grass, small wiry fibrous roots or feathers. The eggs are generally three in number, of a dull greenish white, banded round the centre or towards the larger end with blotches and spots of blackish and chestnut-brown, which in some instances are very minute; the medium length of the egg is nine lines and a half by seven lines in breadth. On an intruder approaching the nest, the birds fly about and hover over his head, and will even sit on the same branch on which the nest is placed while the intruder is in the act of robbing it of the eggs; all the time uttering a peculiar cry, which may be compared to the sound of a child's rattle, or the noise produced by the small cog-wheels of a steam-mill.

The stomach is muscular, and the food consists of insects of various kinds.

The sexes are alike in plumage, and may be thus described:—

Head, neck, throat, sides of the chest, upper surface and tail, glossy greenish black; over each eye a narrow line of white; wings brown; wing-coverts with a small triangular spot of white at the tip; under surface pale buffy white; irides, bill and feet black.

The figures are of the natural size.



SEISURA INQUIETA.

SEISURA INQUIETA.

Restless Flycatcher.

Turdus inquietus, Lath. Ind. Orn. Supp., p. xl.

Restless Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 181.—Shaw, Gen. Zool., vol. x. p. 263.—Lath. Gen. Hist., vol. v. p. 120.

Turdus volitans, Lath. Ind. Orn. Supp., p. xli.

Volatile Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 183.—Shaw, Gen. Zool., vol. x. p. 290.—Lath. Gen. Hist., vol. v. p. 122.

Seisura volitans, Vig. and Horsf. in Linn. Trans., vol. xv. p. 250.—Swains. Class. of Birds, vol. ii. p. 256.—

G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 43.—Nat. Lib. Orn., vol. x., Flycatchers, pl. 12. p. 138.

Jit-tee-gnut, Aborigines of Western Australia.

The Grinder, of the Colonists of Swan River and New South Wales.

THIS species ranges over the whole of the southern portions of the Australian continent, and appears to be as numerous at Swan River as it is in New South Wales, where it may be said to be universally distributed, for I observed it in every part I visited, both among the brushes as well as in the more open portions of the country, in all of which it is apparently a stationary species. It is a bird possessing many peculiar and very singular habits. It not only captures its prey after the usual manner of the other Flycatchers, but it frequently sallies forth into the open glades of the forest and the cleared lands, and procures it by poising itself in the air with a remarkably quick motion of the wings, precisely after the manner of the English Kestrel (*Tinnunculus Alaudarius*), every now and then making sudden perpendicular descents to the ground to capture any insect that may attract its notice. It is while performing these singular movements that it produces the remarkable sound, which has procured for it from the colonists of New South Wales the appellation of “The Grinder.” The singular habits of this species appear to have attracted the notice of all who have paid any attention to the natural history of New South Wales: Mr. Caley observes, “It is very curious in its actions. In alighting on the stump of a tree it makes several semicircular motions, spreading out its tail at the time, and making a loud noise somewhat like that caused by a razor-grinder at work. I have seen it frequently alight on the ridge of my house, and perform the same evolutions:” and Latham says, “It is observed to hover about two feet from the ground, making sudden darts on something, which, by attention, was found to be a sort of worm, which this bird, by a chirping note, and tremulous motion of the wings, with the tail widely expanded, seemed to fascinate out of its hole in the ground.” To this I may add the following account of the actions and manners of this species as observed by Mr. Gilbert in Western Australia:—

“This bird is found in pairs in every variety of situation. Its general note is a loud harsh cry several times repeated; it also utters a loud clear whistle; but its most singular note is that from which it has obtained its colonial name, and which is only emitted while the bird is in a hovering position at a few feet above the ground; this noise so exactly resembles a grinder at work, that a person unaware of its being produced by a bird might easily be misled. Its mode of flight is one of the most graceful and easy imaginable; it rarely mounts high in flying from tree to tree, but moves horizontally with its tail but little spread, and with a very slight motion of the wings; it is during this kind of flight that it utters the harsh note above-mentioned; the grinding note being only emitted during the graceful hovering motion, the object of which appears to be to attract the notice of the insects beneath, for it invariably terminates in the bird descending to the ground, picking up something, flying into a tree close by, and uttering its shrill and distinct whistle.”

The food consists of insects of various kinds, and it is said to devour scorpions also.

The months of September, October and November constitute the breeding-season. The nests observed by me in New South Wales were rather neatly made, very similar to those of *Rhipidura Motacilloides*, cup-shaped, and composed of fine grasses matted together on the outside with cobwebs, and lined with very fine fibrous roots and a few feathers; they were placed on horizontal branches frequently overhanging water. The eggs, which are sometimes only two, but mostly three in number, are dull white, distinctly zoned round the centre with spots of chestnut and greyish brown, the latter colour appearing as if beneath the surface of the shell; their medium length is nine lines and a half by seven lines in breadth. The nests found by Mr. Gilbert in Western Australia were remarkably neat and pretty, and were formed of cobwebs, dried soft grasses, narrow strips of gum-tree bark, the soft paper-like bark of the *Melaleuca*, &c., and were usually lined with feathers or a fine wiry grass, and in some instances horse-hair; the situations chosen for its erection are the most difficult of access, being the upper side, the extreme end and the dead portion of a horizontal branch. The bird is very reluctant to leave the nest, and will almost suffer itself to be handled rather than desert its eggs.

The sexes are very similar in plumage, but the female and young males have the lores or space between the bill and the eye not so deep a black as in the male.

Head and all the upper surface shining bluish black; wings dark brown; tail brownish black; lores deep velvety black; under surface silky white, with the exception of the sides of the chest, which are dull black; irides dark brown; basal half of the sides of the upper mandible and the basal two-thirds of the lower mandible greenish blue; the remainder of the bill bluish black; legs and feet dark bluish brown.

The figures are of the natural size, the upper one exhibiting a rufous tint on the breast, which frequently occurs.



PERZEPHONETUS NUPIDUS: Gould.

PIEZORHYNCHUS NITIDUS, *Gould.*

Shining Flycatcher.

Piezorhynchus nitidus, Gould in Proc. of Zool. Soc., Part VIII. p. 171.

Ung-bur-ka, Aborigines of Port Essington.

I HERE give a representation of a Flycatcher, whose habitat, so far as we know, is restricted to the northern portions of Australia. It is by no means scarce at Port Essington, but, from the extreme shyness of its disposition and the situations it inhabits, it is seldom seen; specimens in fact are not procured without considerable trouble and difficulty. As I have not myself seen the bird in its native haunts, I shall transcribe, with as little alteration as possible, Mr. Gilbert's notes respecting it:—"Inhabits the densest mangroves and thickets, and is usually seen creeping about close to the ground among the fallen trees in the swamps, at which time it utters a note so closely resembling the croak of a frog, that it might easily be mistaken for the voice of that animal; this peculiar note would seem to be only emitted while the bird is feeding on the ground; for when it occasionally mounts to the higher branches of the trees it utters a rather pleasing succession of sounds resembling *twit-te-twite*; on the slightest disturbance it immediately descends again to the underwood and recommences its frog-like note. The nest is either built among the mangroves, or on the verge of a thicket near an open spot. One that I found among the mangroves was built on a seedling-tree not more than three feet from the ground; another was on a branch overhanging a small running stream within reach of the hand; while a third, constructed on the branches of the trees bordering a clear space in the centre of a dense thicket, was at least twenty feet high. The nest at all times so closely resembles the surrounding branches, that it is very difficult to detect unless the birds are very closely watched; in some instances it looks so like an excrescence of the tree, and in others is so deeply seated in the fork whereon it is placed, that it can only be discovered when the bird is sitting upon it. The nest is about two inches and a half in height and three and a quarter in diameter, is of a cup-shaped form, with the rim brought to a sharp edge, and is outwardly composed of the stringy bark of an *Eucalyptus* bound together on the outside with vegetable fibres, among which in some instances cobwebs are mixed: all over the outside of the nest small pieces of bark resembling portions of lichens are attached, some of them hanging by a single thread and moving about with every breath of air; the internal surface is lined with a strong wiry thread-like fibrous root, whereby the whole structure is rendered nearly as firm as if it were bound with wire."

The eggs, which are two in number, are ten lines long and seven lines broad, of a bluish white, blotched and spotted all over with olive and greyish brown, the spots of the latter hue being less numerous and more obscure; the spots inclining towards the form of a zone at the larger end.

The food consists of insects of various kinds.

The male has the whole of the plumage rich deep glossy greenish black; irides dark brown; bill greyish blue at the base, black at the tip; tarsi greenish grey.

The female has the top and sides of the head and the back of the neck rich deep glossy greenish black; the remainder of the upper surface, wings and tail rusty brown; and the whole of the under surface white.

The figures are those of a male and a female of the natural size.



MYIAGRA PLUMBEA: Vig. & Horsf.

J. Gould and H. C. Richter del. et lith.

Hallman del. & Walton Imp.

MYIÄGRA PLUMBEA, *Vig. and Horsf.*

Plumbeous Fly-catcher.

Myiägra plumbea, Vig. and Horsf. in Linn. Trans., vol. xv. p. 254.—Less. Man. d'Orn., tom. i. p. 181.—Swains. Class. of Birds, vol. ii. p. 260.

A SUMMER visitant to New South Wales, where it takes up its abode on high trees bordering creeks and low valleys, and captures its insect food under the shady branches, the *Myiägra plumbea* is mostly seen in pairs, which are rather thinly dispersed over the districts forming its usual place of resort. A low whistling note, frequently uttered by the males, is, in all probability, indicative of the season of love; but whether it is also uttered at any other than the pairing and breeding time, I had no opportunities of observing. On the approach of winter it retires northwards from New South Wales, and is not to be met with there until the following August or September, the months in which spring commences in the opposite hemisphere.

It is a most active bird; in fact all its positions are characterized by great liveliness; for while in a state of comparative repose, or when not actually in pursuit of insects, it displays a constant tremulous motion of the tail, by which means its presence is often betrayed when it would otherwise remain unnoticed.

As is the case with all the other members of the genus, the sexes present considerable difference in their plumage, the female having the throat of a bright rusty red, while the throat of the male is of a rich greenish lead-colour, like the upper surface,—a style of colouring which has suggested the specific name of *plumbea*. The young males during the first year so closely assimilate in plumage to the female, that by dissection alone can they be distinguished with certainty.

New South Wales appears to be the great nursery of this species, for I never met with it either in Van Diemen's Land or in any other of the Australian colonies; where then does it go during the colder months of the year? The woods bordering the north coast are inhabited by a nearly allied but distinct species; the *M. plumbea* would not therefore be likely to pass over this country, or to find therein a resting-place among the individuals of another species. If however we consider the vast extent of Australia, and the probability that its central parts may be far more fertile than is generally supposed, it is not unlikely that the winter abode of this and numerous other birds will there be found, and that thereby the mysteriously sudden appearance and departure of many species, which are so frequently taking place, will be readily accounted for.

The nest is cup-shaped, rather deep, formed of moss and lichens and neatly lined with feathers, and is generally placed on the horizontal branch of a tree. I did not succeed in procuring the eggs.

The male has the whole of the upper surface, wings, tail and breast lead-colour, glossed with green on the head, neck and breast, and becoming gradually paler towards the extremity of the body and on the wings and tail; primaries slaty black; secondaries faintly margined with white; under surface of the wing, abdomen and under tail-coverts white; bill leaden blue, except at the extreme tip, which is black; irides and feet black.

The female has the head and back lead-colour, without the greenish gloss; wings and tail brown, fringed with bluish grey, particularly the secondaries; throat and breast rich rusty red, gradually fading into the white of the lower part of the abdomen and under tail-coverts; upper mandible black; under mandible pale blue, except at the extremity, which is black.

The Plate represents the two sexes of the natural size.



MYIAGRA CONTINUA: Gould.

J. Gould and F. C. Richter del. et lith.

Hillmandel & Walton Imp.

MYIAGRA CONCINNA, *Gould.*

Pretty Flycatcher.

Myiagra concinna, Gould in Proc. of Zool. Soc., November 1847.

THIS species is a native of the north-western portion of Australia, where it inhabits the dense mangroves and thickets adjacent to swamps. It is very shy and retiring in its disposition, but may occasionally be seen on the topmost branches of the highest trees of the forest. Like the other Flycatchers, it has the habit of sitting for a long time on a branch, watching the various insects as they pass, now and then darting forth and capturing one on the wing, and then returning again to the branch from which it had flown.

When among the mangroves it utters a rather agreeable twittering song, but when among the high trees it emits a loud and shrill whistle, drawn out at times to a considerable length.

The stomach is muscular, and the food consists of insects of various kinds and their larvæ.

Like the other members of the genus, the sexes differ considerably in colour; they may be thus described:—

The male has the whole of the upper surface, wings, tail and breast lead-colour, glossed with green on the head, neck and breast, and becoming gradually paler towards the extremity of the body and on the wings and tail; primaries slaty black; secondaries faintly margined with white; under surface of the wing, abdomen and under tail-coverts white; bill leaden blue, except at the extreme tip, which is black; irides brown; feet blackish grey.

The female has the head and back lead-colour, without the greenish gloss; wings and tail brown, fringed with bluish grey, particularly the secondaries; throat and breast rich rusty red; abdomen and under tail-coverts white, which colour does not gradually blend with the rusty red of the breast, as in the female of *Myiagra plumbea*; upper mandible black; under mandible pale blue, except at the tip, which is black.

The Plate represents the two sexes of the natural size.



MYIAGRA NITIDA: Gould.

J. Gould and H. C. Richter del et lith.

Hallman and Walton imp

MYIAGRA NITIDA, *Gould.*

Shining Flycatcher.

Todus Rubecula, Lath. Ind. Orn. Supp., p. xxii., female.

Red-breasted Tody, Lath. Gen. Syn. Supp., vol. ii. p. 147.—Shaw, Gen. Zool., vol. viii. p. 126.—Lath. Gen. Hist., vol. iv. p. 92, female.

Myiagra Rubeculoides, Vig. and Horsf. in Linn. Trans., vol. xv. p. 253, female.

——— *nitida*, Gould in Proc. of Zool. Soc., Part V. p. 142 ; and in Syn. Birds of Australia, Part IV, male.

Satin Sparrow, of the Colonists of Van Diemen's Land.

THE *Myiagra nitida* arrives in Van Diemen's Land about the end of September, commences breeding soon after its arrival, rears a somewhat numerous progeny during the months of summer, and departs again in February. In performing these migrations it necessarily passes directly over the colonies of South Australia and New South Wales, yet it seldom occurs in collections from those countries, and I believe is only seen there during the passage. It is a most lively, showy and active bird, darting about from branch to branch and sallying forth in the air in pursuit of its insect prey with a most singular, quick, oscillating or trembling motion of the tail.

I experienced but little difficulty in obtaining several of its nests and eggs among the gullies and forest lands on the north side of Mount Wellington, particularly those immediately in the rear of New Town, near the residence of the Rev. Thomas J. Ewing, who frequently accompanied and aided me in my search. The nest is usually placed at the extreme tip of a dead branch, at a height varying from twenty to forty feet from the ground. Some nests are formed of a minute species of light green moss, others are constructed of fine threads of stringy bark ; all are rendered very warm by a dense lining of soft hair, probably that of the opossums or kangaroo rats, and wool, or the soft silk-like threads of the flowering stalks of moss, the down of the tree-fern, and the blossoms of many other kinds of plants ; and the outsides of all are very similar, being alike ornamented with small pieces of lichen stuck on without any degree of regularity ; these different materials are all felted together with cobwebs, or vegetable fibres. The form of the nest appears to depend upon the nature of the site upon which it is built : if placed on a level part of the branch, the nest is large and high ; if in a fork, then it is a more shallow structure ; in each case the opening is as perfect a circle as the nature of the materials will admit : the height varies from two inches to three inches and a quarter, the average breadth of the opening is about one inch and three-quarters, and the depth one inch. The eggs are generally three in number, somewhat round in form, and of a greenish white spotted and blotched all over with umber brown, yellowish brown, and obscure markings of purplish grey ; their medium length is nine lines and breadth seven lines.

The weight of this bird is nearly three ounces and three-quarters ; the stomach is muscular, and those examined contained the remains of dipterous and coleopterous insects.

The note is a loud piping whistle frequently repeated.

The male has the lores deep velvety black ; all the upper surface, wings, tail and breast of a rich deep blackish green with a metallic lustre ; primaries deep brown ; under surface of the shoulder, abdomen and under tail-coverts white ; bill lead-colour at the base, passing into black at the tip ; irides and feet black.

The female, as will be seen on reference to the accompanying Plate, differs considerably from the male ; the upper surface being much less brilliant, and the throat and breast of a rich rusty red, a style of colouring which is also characteristic of the young males during the first autumn of their existence.

The figures represent the two sexes of the natural size.



MYIAGRA LATIROSTRIS: *Gould.*

J. Gould and H.C. Richter del et lith.

Hillman & Walton Imp.

MYIAGRA LATIROSTRIS, *Gould.*

Broad-billed Flycatcher.

Myiagra latirostris, Gould in Proc. of Zool. Soc., Part VIII. p. 172.

I POSSESS two examples of this species, one of which was procured on the north coast by Mr. Dring, and the other at Port Essington by Mr. Gilbert. It is in every respect a true *Myiagra*, and is rendered remarkably conspicuous by the great breadth or lateral dilatation of the bill. As no notes accompanied the specimens, I am unable to give any particulars as to its habits and economy; in all probability they are very similar to those of the other members of the genus.

All the upper surface, wings and tail dark bluish gray, with a shining greenish lustre on the head and back of the neck; throat and chest sandy buff; under surface white; bill black; irides blackish brown; feet black.

The figures are of the natural size.



J. Gould and H. C. Richter del et lith.

MICROECA MACROPTERA

Hallman del & Wilson Imp.

MICRÆCA MACROPTERA.

Great-winged Micræca.

Myiagra macroptera, Vig. and Horsf. in Linn. Trans., vol. xv. p. 254.

Micræca macroptera, Gould in Proc. of Zool. Soc., Part VIII. p. 172.

Loxia fascinans, Lath. Ind. Orn. Supp., p. xlvi. ?—Shaw, Gen. Zool., vol. ix. p. 298 ?

Fascinating Grosbeak, Lath. Gen. Syn. Supp., vol. ii. p. 197.—Ib. Gen. Hist., vol. v. p. 266 ?

Brown Flycatcher, of the Colonists.

THIS bird is generally dispersed over the colonies of New South Wales and South Australia, where it inhabits nearly every kind of situation, from the open forest lands of the interior to the brushes of thickly grown trees near the sea-coast; shrubs not a yard high, and the branches of the highest gum-trees being alike resorted to. It is certainly the least ornamental of the Australian birds, for it is neither gay-coloured, nor is it characterized by any conspicuous markings; these deficiencies, however, are, as is usually the case, amply compensated for by the little sombre tenant of the forest being endowed with a most cheerful and pleasing song, the notes of which much resemble, but are more clear and powerful than the spring notes of the Chaffinch (*Fringilla Cœlebs*), and which are poured forth at the dawn of day from the topmost dead branch of a lofty gum-tree, an elevated position which appears to be frequently resorted to for the purpose of serenading its mate, its usual place of abode being much nearer the ground. It is mostly met with in pairs, and may be frequently seen perched on the low bushy twigs of a thistle-like plant, occasionally on the gates and palings and in the gardens of the settlers; Mr. Caley states that “it has all the actions of the British *Robin Red-breast*, except coming inside houses. When a piece of ground was fresh dug it was always a constant attendant.” It appeared to me that its actions resemble quite as much those of the Flycatchers as of the Robins, and at the same time are sufficiently distinct from either to justify the bird being made the type of a new genus; I may particularly mention a singular lateral movement of the tail, which it is continually moving from side to side.

Its food consists of insects, which it captures both among the foliage of the trees and on the wing, frequently flying forth in pursuit of passing flies and returning again to the branch it had left.

It generally rears two broods in the course of the year.

The nest, which is built in October, is a slight, nearly flat and very small structure, measuring only two inches and a half in diameter by half an inch in depth; it is formed of fine fibrous roots, decorated externally with lichens and small flat pieces of bark, attached by means of fine vegetable fibres and cobwebs; and is most artfully placed in the fork of a dead horizontal branch, whereby it is rendered so nearly invisible from beneath, that it easily escapes detection from all but the scrutinizing eye of the aboriginal native. The eggs are generally two in number, of a pale greenish blue, strongly marked with dashes of chestnut-brown and indistinct blotches of grey; they are eight and a half lines long by five and a half lines broad.

The sexes are alike in colour; the young differs from the adult in being much paler, and in being spotted with white on the head and back and with brown on the breast.

The adult has all the upper surface and wings pale brown; wing-coverts slightly tipped with white, and a wash of white on the margins of the tertiaries and tips of the upper tail-coverts; tail dark brown, the external feather white, and the next on each side with a large spot of white on the inner web at the tip; all the under surface pale brownish white, fading into nearly pure white on the chin and abdomen; bill, irides and feet brown.

The figures represent the two sexes of the size of life.



MYIARCHUS FLAVIGASTER Gould.

MICRÆCA FLAVIGASTER, *Gould.*

Yellow-bellied Micræca.

Micræca flavigaster, Gould in Proc. of Zool. Soc., Part X. p. 132.

Brown Flycatcher, Residents at Port Essington.

THIS little Flycatcher, which is a native of the northern portions of Australia, is met with in the neighbourhood of Port Essington in every variety of situation, and is particularly abundant on all the islands in Van Diemen's Gulf. "Its habits and manners," says Mr. Gilbert, "assimilate more nearly to those of the *Petroicæ* than to those of any other group. It gives utterance to many different notes, pouring forth at the dawn of day a strain much resembling that of some of the *Petroicæ*, and like them remaining stationary for a long time while giving utterance to its very pretty and agreeable melody. In the middle of the day, when the sun is nearly vertical, it leaves the trees and soars upward in regular circles, like the Skylark, until it arrives at so great a height as to be scarcely perceptible; it then descends perpendicularly until it nearly reaches the trees, when it closes its wings and apparently falls upon the branch on which it alights. During the whole of this movement it pours forth a song, some parts of which are very soft and melodious, but quite different from that of the morning; in the evening its song is again varied, and then so much resembles the unconnected notes of the *Gerygones*, that I have frequently been misled by it. The *Micræca flavigaster* is a very familiar species, inhabiting the trees and bushes close around the houses, and is little alarmed or disturbed at the approach of man. At times it is extremely pugnacious; I have seen a pair attack a crow and beat it until it was obliged to seek safety by flight, all the while calling out most lustily. Notwithstanding it is so abundant everywhere, and it must have been breeding during my stay here, as is proved by my killing young birds apparently only a few days old, I did not succeed in finding the nest; and on inquiring of the natives, they could give me no information whatever respecting it or the period of incubation."

The sexes do not differ in colour or size.

The stomach is tolerably muscular, and the food consists of insects of various kinds.

All the upper surface brownish olive; wings and tail brown, margined with paler brown; throat white; all the under surface yellow; irides blackish brown; feet blackish grey.

The figures are of the natural size.



MONARCHA CARINATA.

MONARCHA CARINATA.

Carinated Flycatcher.

Muscipeta carinata, Swains. Zool. Ill., 1st ser., pl. 147.

Drymophila carinata, Temm. Pl. Col. 418. f. 2.

Monarcha carinata, Vig. and Horsf. in Linn. Trans., vol. xv. p. 255.—Gould in Syn. Birds of Australia, Part II.

THIS is a migratory bird in New South Wales, arriving in spring and departing before winter. It gives a decided preference to thick brushy forests, such as those at Illawarra and other similar districts extending from the Hunter to Moreton Bay. It is also equally abundant in the thick brushes which clothe the sloping mountains of the interior. During the spring or pairing time it becomes very animated, and is continually flying about and beneath the branches of the trees; it does not capture insects, like the true Flycatchers, on the wing, but obtains them while hopping about from branch to branch, after the manner of the *Pachycephalæ*. It has a rather loud whistling note, which being often repeated tends considerably to enliven the woods in which it dwells.

I dissected many examples in the bright plumage, all of which proved to be males, yet I could not fully satisfy myself whether the upper bird in the Plate is a female, a young bird, or a distinct species; I believe, however, that it will prove to be the female.

The *Monarcha carinata* does not inhabit Van Diemen's Land or South Australia; its great nursery is evidently the south-eastern portion of the country: a distinct but nearly-allied species inhabits the north coast, of which I have specimens in my collection from the neighbourhood of Cape York.

Forehead, lores and throat jet-black; all the upper surface grey; wings and tail brown; sides of the neck and the chest light grey; abdomen and under tail-coverts rufous; bill beautiful light blue-grey, the tip paler than the base; legs bluish lead-colour; irides black; inside of the mouth greyish blue.

In all probability, the females and the young males of the year are destitute of the black mark on the face, and the upper figure is that of a female or a male in the plumage of the first year.

The figures are of the size of life.



MONARCHIA TRIVIRGATA.

MONARCHA TRIVIRGATA.

Black-fronted Flycatcher.

Drymophila trivirgata, Temm. Pl. Col. 418. fig. 1.

Monarcha trivirgata, Gould in Syn. Birds of Australia, Part II.

ALTHOUGH the *Monarcha trivirgata* has been known to naturalists for many years it is still a scarce bird, very few specimens occurring in any of the numerous collections sent home from Australia, which is doubtless occasioned by its true habitat not having been yet discovered. All the specimens I have seen have been procured in the Moreton Bay district of the east coast.

I have never yet seen what may be considered the female of this bird; all the examples that have come under my notice being males and marked precisely alike, with the exception of one procured during the early part of Dr. Leichardt's expedition from Moreton Bay to Port Essington, which differs in being destitute of the rufous tint on the flanks.

Forehead, throat, space round the eye, and the ears jet-black; upper surface dark grey; tail black, the three outer feathers on each side largely tipped with white; cheeks, chest and flanks rufous; abdomen and tail-coverts white; bill lead-colour; feet black.

The figures are of the natural size, and represent the bird as usually seen, and also the variation in colouring above-mentioned.



GERYGONE ALBUGULARIS; Gould.

J. Gould and H.C. Richter del et lith.

Ballman and Walton Imp.

GERYGONE ALBOGULARIS, *Gould.*

White-throated Gerygone.

Psilopus albogularis, Gould in Proc. of Zool. Soc., Part V. p. 147 ; and in Syn. Birds of Australia, Part IV.

THIS sprightly and active little bird is a stationary species and is abundantly dispersed over all parts of New South Wales, but evinces a greater preference for the open forests of *Eucalypti* than for the brushes near the coast. I found it in considerable numbers in every part of the Upper Hunter district, nearly always among the gum-trees, and constantly uttering a peculiar and not very harmonious strain. Like its near allies it is very active among the small leafy branches of the trees, where it searches with the greatest avidity for insects, upon which it almost exclusively subsists; resorting for this purpose to trees of all heights, from the low sapling of two yards high to those of the loftiest growth.

I believe that a species very nearly allied to the present inhabits the north coast of Australia: it is very readily distinguished by the markings of the tail; and must not be confounded with the bird here represented.

I have killed young birds in January which had not long left the nest, but was not so fortunate as to discover the nest itself.

The sexes are nearly alike in plumage; but the young of the year are distinguished from the adult by the throat being of the same colour as the breast, instead of white.

Crown of the head, ear-coverts, and all the upper surface olive-brown; throat white; chest and all the under surface bright citron-yellow; two centre tail-feathers brown, the remainder brown at the base, above which is a bar of white, succeeded by a broader one of deep blackish brown; the tips of all but the two middle ones buffy white on their inner web; bill blackish brown; irides scarlet; feet blackish brown in some specimens, and leaden brown in others.

The figures represent an adult and a young bird of the year of the natural size.



GERYGONE FUSCA: Gould.

J. Gould and F. C. Richter del. et lith.

Hallman del. & Walton Imp.

GERYGONE FUSCA, *Gould.*

Fuscous Gerygone.

Psilopus fuscus, Gould in Proc. of Zool. Soc., Part V. p. 147 ; and in Syn. Birds of Australia, Part IV.

Gerygone fusca, Gould in De Strzelecki's Phys. Descr. of New South Wales and Van Diemen's Land, p. 321.

THE *Gerygone fusca* is an inhabitant of New South Wales, where it is to be found in all the brushes near the coast, as well as in the cedar and other brushes on the sides of the ranges in the interior. As its form would lead us to imagine, it has much of the habit of the Flycatcher, and lives almost exclusively upon insects, such as aphides and other swift-winged species, which are as frequently taken on the wing as they are on the under sides of leaves, &c. It particularly loves to dwell in the most retired and gloomy part of the forest, among the creeping Bignonias, &c., and is a most active and lively little bird, flitting about from branch to branch ; sometimes, like the true Flycatchers, returning again to the same branch, and at others hanging to the smaller branches and scrutinizing the under sides of the leaves, after the manner of the *Acanthizæ*.

Its song, which is almost incessantly poured forth, is a pleasing, twittering sound.

The breeding-season comprises the months of September, October and November. The nest is a delicate and beautiful structure of a domed oblong form, the lower end terminating in a point, with the entrance at the side near the top covered with a well-formed spout, which completely excludes both sun and rain from the interior of the nest ; it is about eight inches in height and ten in circumference ; the spout projecting about two inches, and the entrance being scarcely an inch in diameter. The body of a nest found in the brushes of the Hunter was composed of green moss, mouse-eared lichen, soft wiry grasses, the inner bark of trees and other materials, and was lined with extremely soft grasses. The eggs are three in number, and are very similar, both in size and colour, to those of the *Malurus cyaneus*, being minutely speckled with red on a white ground ; they are seven and a half lines long by five and a half lines broad.

The sexes are alike in colour.

Crown of the head, all the upper surface and wings dark fuscous brown, slightly tinged with olive ; two centre tail-feathers brown ; the remainder white at the base, succeeded by a broad band of deep blackish brown, round which is a broad stripe of white, which entirely crosses the outer feathers, but only the inner webs of the remainder, the tips pale brown ; throat and chest grey ; abdomen and under tail-coverts white ; bill and feet deep blackish brown ; irides bright brownish red.

The Plate represents the bird of the natural size.



GERYGONE CULICIVORUS: *Gould.*

J. Gould and H. C. Richter del. & lith.

Ballouardet & Watson imp.

GERYGONE CULICIVORUS, *Gould.*

Western Gerygone.

Psilopus culicivorus, Gould in Proc. of Zool. Soc., Part VIII. p. 174.

War'-ryle-bur-dang, Aborigines of the lowlands of Western Australia.

THIS species is plentifully dispersed over the colony of Swan River in Western Australia, where it inhabits forests, scrubs, and all situations where flowering trees abound, and where it is seen either in pairs or in small groups of four or five in number. Its food consists wholly of aphides and other small insects, which are captured on the wing or from off the flowers; it sometimes traverses the smaller branches, and even the upright boles of trees, prying about and searching for its prey with the most scrutinizing care. Its powers of flight are rarely exerted for any other purpose than to convey it from shrub to shrub, and for its little sallies in pursuit of insects, much after the manner of the true Flycatchers.

Its notes are very varied, being at one time a singing kind of whistle, and at others a somewhat pleasing and plaintive melody; but it has a singular habit of uttering, when flitting from tree to tree, a succession of notes and half-notes, some of which are harmoniously blended, while others are equally discordant, and resemble a person producing notes at random on an instrument with which he is unacquainted.

It is said by the natives to breed in September and October.

The nest is suspended by the top to the extremity of a branch, and is formed of threads of bark, small spiders' nests, green moss, &c., all felted together with cobwebs and vegetable fibres, and warmly lined with feathers; it is about eight inches in length, pointed at the top and at the bottom, and about nine inches in circumference in the middle; the entrance is a small round hole, about three inches from the top, with a slight projection immediately above it. I did not succeed in procuring the eggs.

The sexes are alike in plumage.

All the upper surface olive-brown; wings brown margined with olive; two centre tail-feathers brown; the remainder white, crossed by an irregular band of black and tipped with brown, the band upon all but the external feathers so blending with the brown at the tip that the white between merely forms a spot on the inner web; lores blackish brown; line over the eye, throat and chest light grey, passing into buff on the flanks, and into white on the centre of the abdomen and under tail-coverts; irides light reddish yellow; bill and feet black.

The Plate represents a male and a female of the natural size.



GERYGONE MAGNIROSTRIS: Gould.

J. Gould and H. C. Richter del. et lith.

Hillmandel & Walton Imp.

GERYGONE MAGNIROSTRIS, *Gould.*

Great-billed Gerygone.

Gerygone magnirostris, Gould in Proc. of Zool. Soc., Part X. p. 133.

OF this species I regret to say but little information has as yet been received; the two examples in my collection are all that have come under my notice, and these were shot by Mr. Gilbert on Greenhill Island near Port Essington, while hovering over the blossoms of the mangroves and engaged in capturing the smaller kinds of insects upon which it feeds, during which occupation he observed that it gave utterance to an extremely weak twittering song: unfortunately he had no further opportunity of making himself acquainted with its habits and manners, which, however, doubtless resemble those of the other members of the genus.

All the upper surface brown; margins of the primaries slightly tinged with olive; tail-feathers crossed near the extremity by an indistinct broad band of brownish black; all the under surface white, tinged with brownish buff; irides light brown; bill olive-brown; the base of the lower mandible pearl-white; feet greenish grey.

The Plate represents male and female of the natural size.



GERYGONE LAEVIGASTER: *Gould*.

GERYGONE LÆVIGASTER, *Gould.*

Buff-breasted Gerygone.

Gerygone lævigaster, Gould in Proc. of Zool. Soc., Part X. p. 133.

MR. GILBERT killed several specimens of this little bird on the Cobourg Peninsula, and on the islands in Van Diemen's Gulf, and sometimes observed a solitary individual among the mangroves near the settlement of Port Essington. He states that it has a very pleasing but weak piping note, and occasionally utters a number of notes in slow succession, but not so much lengthened as those of the *Gerygone culicivorus* of Swan River; like that bird it hovers up and down the smaller branches of the trees and creeps about the thickets. It is very tame, and scarcely ever flies from the tree upon the approach of an intruder, but sits turning its little head about from side to side until the hand is almost upon it, when it merely hops upon another branch and again quietly looks about, apparently quite unconcerned.

The stomach is tolerably muscular, and the food consists of small insects, principally of the soft-winged kinds.

A narrow obscure line, commencing at the nostrils and passing over the eye, yellowish white; all the upper surface rusty brown; primaries brown, margined with lighter brown; tail whitish at the base, gradually deepening into nearly black, the lateral feather largely, and the remainder, except the two middle ones, slightly tipped with white; all the under surface white, slightly washed with yellow; irides light reddish brown; bill olive-brown; base of lower mandible light ash-grey; feet dark greenish grey.

The figures represent the two sexes of the natural size.



GERYGONE CHLORONOTUS; Gould.

J. Gould and H. C. Richter del et lith.

Hallman del & Walton imp.

GERYGONE CHLORONOTUS, *Gould.*

Green-backed Gerygone.

Gerygone chloronotus, Gould in Proc. of Zool. Soc., Part X. p. 133.

THIS species is an inhabitant of the northern parts of Australia : it is tolerably abundant at Port Essington, where it dwells among the extensive beds of mangroves which stretch along the coast. It is of a very shy and retiring disposition, and as the colouring of its back assimilates very closely to that of the leaves of the mangroves, it is a very difficult bird to sight as it creeps about among the thick branches in search of insects, upon which it solely subsists. In form and in most of its habits and economy it offers some difference from the typical members of the genus *Gerygone*, and it would be no great stretch of propriety to assign to it a new generic appellation : the more lengthened form of its legs, the more rigid structure of its primaries, and the lesser development of the bristles at the gape, are among the points in which it differs from the *Gerygone fuscus* of the brushes of New South Wales. The latter feeds upon the smallest kinds of gnats and other soft insects which it captures in the air ; on the other hand, the structure of the present bird would lead us to infer that the insects it feeds upon are procured either on the leaves or about the branches.

The sexes are so precisely similar in plumage, and differ so little in size, that dissection must be resorted to to distinguish the one from the other.

Head and back of the neck brownish grey ; back, wing-coverts, rump, upper tail-coverts, margins of the primaries, and the margins of the basal half of the tail-feathers bright olive-green ; primaries and tail-feathers brown, the latter becoming much darker towards the extremity ; under surface white ; sides and vent olive-yellow ; irides wood-brown ; upper mandible greenish grey ; lower mandible white ; feet blackish grey.

The Plate represents the two sexes of the natural size.



SMICRORNIS BREVIROSTRIS: *Gould.*

SMICRORNIS BREVIROSTRIS, *Gould.*

Short-billed Smicrornis.

Psilopus brevirostris, Gould in Proc. of Zool. Soc., Part V. p. 147.

Geah-ter-but, Aborigines of the mountain districts of Western Australia.

UNTIL more information has been acquired respecting the members of this genus, I shall regard the species from Swan River and New South Wales as the same, although some trivial differences exist in the examples from those distant localities.

It is a constant inhabitant of the leafy branches of the *Eucalypti*, and resorts alike to those of a dwarf stature and those of the loftiest growth. While searching for insects, in which it is incessantly engaged, it displays all the scrutinizing habits of the *Pari* or Tits, clinging about the finest twigs of the outermost branches, prying underneath and above the leaves and among the flowers, uttering all the while or very frequently a low simple song. I found it abundant in every part of South Australia I visited, particularly in the neighbourhood of Adelaide and in the gulleys of the ranges skirting the belts of the Murray; in New South Wales it was frequently seen at Yarrundi, and other parts of the Upper Hunter district. Mr. Gilbert states that in Western Australia he only met with it in the York district, that it was always seen on the branches of trees, where it feeds on larvæ and small insects, that its flight was of very short duration, merely flitting from tree to tree, and that its note is a weak twitter, a good deal resembling that of the *Acanthiza chrysorrhæa*.

It breeds in September and the two following months, and forms a nest of the downy buds of plants, mixed with green moss, the cocoons of spiders, &c., all matted and bound together very firmly and closely with spiders' webs, and the inside lined at the bottom with feathers; it is globular in form, and is attached by the back part to an upright branch, with the entrance in the side, the upper part over the entrance being carried out to a point which shades the opening like the eaves of a house. The eggs are three in number, of a dull buff, marked with extremely fine freckles at the larger end; they are six and a half lines long by four and a half lines broad.

A narrow stripe of yellowish white passes from the bill over each eye; crown of the head brownish grey, passing into olive at the back of the neck; back, rump and upper tail-coverts olive, brightest on the latter; ear-coverts and sides of the face very pale reddish brown; throat and chest white tinged with olive, with a faint longitudinal mark of brown down the centre of each feather, the remainder of the under surface pale citron-yellow; two centre tail-feathers brown; the remainder brown at the base, the middle being crossed by a broad band of blackish brown, which is succeeded by a spot of white on the inner webs, the tips pale brown; feet blackish brown; irides pale straw-yellow; bill varying from fleshy white to ashy grey.

The figures represent the two sexes, which are similar in plumage, of the natural size.



SMICRORNIS FLAVESCENS: *Gould.*

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

SMICRORNIS FLAVESCENS, *Gould.*

Yellow-tinted Smicrornis.

Smicrornis flavescens, Gould in Proc. of Zool. Soc., Part X. p. 134.

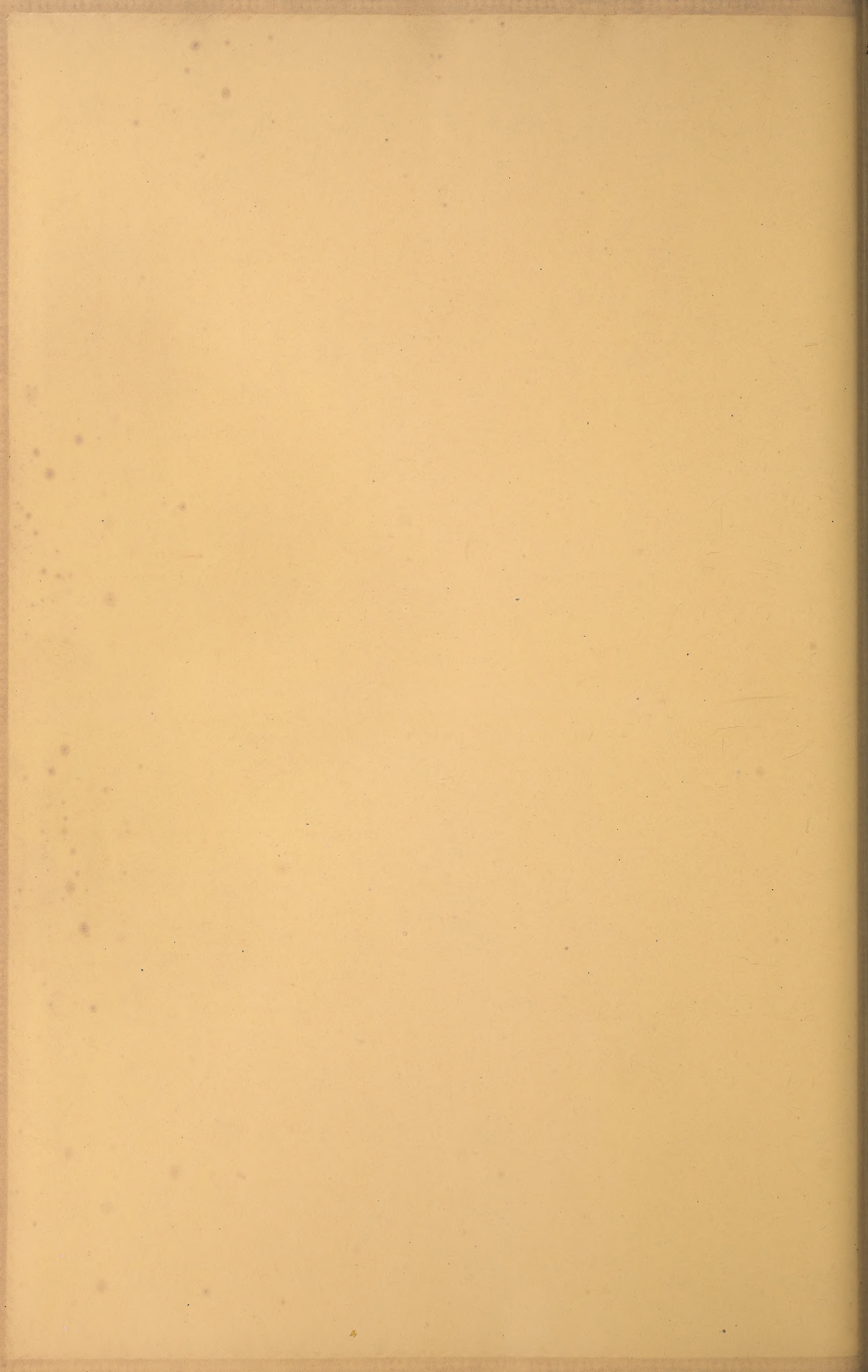
THIS is the least of the Australian birds I have yet seen, scarcely exceeding the smallest Humming-bird. It is tolerably abundant on many parts of the northern coasts of Australia, and particularly on the Cobourg Peninsula; it inhabits most of the high trees in the neighbourhood of Port Essington, keeping to their topmost branches, and there seeking its insect food among the leaves, over which it creeps and clings in every possible variety of position. From the circumstance of its confining itself exclusively to the topmost branches of the trees, it is not easily procured, its diminutive size preventing its being seen.

There is no outward difference in the sexes, either in plumage or in magnitude. Future research, and a longer sojourn in the country than has hitherto been afforded for the investigation of the natural productions of those distant parts, are requisite to determine whether it be migratory or not, and to procure correct information respecting its nidification.

All the upper surface bright yellowish olive; the feathers of the head with an indistinct line of brown down the centre; wings brown; tail brown, deepening into black near the extremity, and with a large oval spot of white on the inner web near the tip of all but the two central feathers; all the under surface bright yellow.

The Plate represents the two sexes of the natural size.





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